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The Art Traveler: Building a user experience system to discover art

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The Art Traveler

Building a user experience system to discover art

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A Thesis Submitted in Partial Fulfillment of the Requirements for
the Degree of Master of Fine Arts in Visual Communication Design

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Abstract

With the increasing popularity of mobile devices and their apps, mobile technologies have changed the nature of travel significantly. With numerous travel apps available today, many tourists can become confused with which one to select and use. Another important factor is that a majority of travel applications are designed for everyone traveling everywhere, not specifically for one kind of tourist and one subject matter.

The goal of this thesis is to create an effective and efficient user experience system. The project is a travel planner for people to pursue an art tour of their own interest. It focuses on designing an effective user navigation system to guide tourists making their travel plans, and provides comprehensive tours to help people appreciate and learn more about art.

To achieve this project, this thesis focuses on interaction design, information design, multimedia technology, as well as user experience design. Considering the independent choice of different tourists, this design provides various ways for them to make their own travel plans and discover art they are interested in.

The final design is presented as an interactive prototype which demonstrates the functionality of the user interface and experience and is used for usability testing.

Keywords: travel planner, art tour, mobile devices, user experience system

Problem Statement

The tourism industry is regarded as one of the biggest sectors in the world, generating an estimated eleven percent of the global gross domestic product.^[1] Providing an effective way to help visitors enjoy their travel is an important task. Today many tourists still use some forms of printed material as their travel guide. These sources often contain outdated information. With the advancement of mobile technology and the extensive use of mobile devices, online interactive experiences have become an important aspect in travel research and planning. When planning a trip, the research engines on mobile devices will help you to find the information about your travel destination. You can find numerous solutions to make your travel plan from different applications. All sorts of accommodation and transportation are available in your mobile device. You can book them at any time. At the destination, the navigation apps will lead you to the sight spots, the restaurants, and the shopping districts. Also, you can translate foreign languages by using an online dictionary. A plethora of travel apps provides too many choices for tourists to select and use. Almost all the travel applications are for everyone, not specific for one kind of tourist. It is easy to get confused with which application is the most appropriate one for you.

Which user experience model is best to use when designing an online travel planner for people to pursue art? How can information, interaction, and user interface design create an effective and efficient tool for people interested in the art field to learn more about art and design when traveling?

This thesis explores creating an effective and efficient user experience system for people, interested in art, to plan their travel plans easily. The goal is to study and analyze the users' behavior when planning a trip, and create an appropriate way for them to help plan and organize trips related to discovering and learning about art. Specifically, the thesis aims to figure out the following questions:

- 1 What do people need to do when they plan a trip?
- 2 How many steps are acceptable when planning travel? How does the sequencing of information affect the experience?
- 3 Which way is appropriate to create travel itineraries for people pursuing arts? Will they prefer to choose recommended line or design by themselves?
- 4 Will travel planner in the mobile devices be better for planning and managing travel itineraries?

The results of this thesis can help to build a user experience system of travel apps and provide a clearer direction to design a travel planner for travelers who want to learn more about the arts.

[1] Kabassi, Katerina. "Personalizing Recommendations for Tourists." *Telematics and Informatics* 27 (February 2010): 51–66.

Survey of Literature

Books

1 **Designing for Interaction: Creating Innovative Applications and Devices**

By Dan Saffer

New Riders. 2nd edition. 2009.

This book provides the broad overview of interaction design. The content includes the design of digital interfaces, mobile devices, physical products, and also service design. It may help designers to think more about interaction and will provide a new thinking direction for the future design.

2 **Smashing UX Design: Foundations for Designing Online User Experiences**

By Jesmond Allen, James Chudley

Wiley. 1st edition. 2012.

Smashing UX Design introduces how to build a successful user experience system through a complete record of the designing process, including competition analysis, user profiles creating, information architecture building, digital model designing, prototyping, and also the digital page designing. By learning how to analyze the user experience, this book will be helpful for designing online UX system.

3 **Mobile Usability**

By Jakob Nielsen, Raluca Budi

New Riders. 1st edition. 2012.

Focusing on small screen designing, this book analyzes various application problems and explains detailedly why some decisions are bad and why others are good. Also, the authors offer their solutions in how to improve user experience of mobile devices. For designers, this book will help them avoid unexpected mistakes and improve the design.

4 **100 Things Every Designer Needs to Know About People**

By Susan Weinschenk

New Riders. 1st edition. 2011.

This book is an interesting collection of designs and ideas about how people communicates with the world. Each section is described with example and appropriate research. The information in this book will be useful for everyone who involved in communicating with people in any medium. People will learn how to understand user's behavior and needs, and how to motivate them to go further.

Survey of Literature

5 **Mobile User Experience: Patterns to Make Sense of it All**

By Adrian Mendoza

Morgan Kaufmann. 1st edition. 2013.

This book introduces what makes Mobile UX unique and how you can quickly master it. From this book, you can learn more about mobile user experience from using flows and wireframes to communicate your mobile user experience system visually, to applying some most common mobile patterns to create real websites or apps. It is fundamental for design students to learn the theoretical and practical concepts of Mobile UX.

6 **The UX Book: Process and Guidelines for Ensuring a Quality User Experience**

By Rex Hartson, Pardha Pyla

Morgan Kaufmann. 1st edition. 2012.

Guiding you through the user experience lifecycle process, this book is a great collection of different examples and real experiences of UX specialists. The concept introduced in this book will help you in any project environment, from web and mobile applications to different kinds of interfaces for ATMs, microwaves or refrigerators. It plays an important role in ensuring a quality user experience.

7 **Simple and Usable Web, Mobile, and Interaction Design**

By Giles Colborne

New Riders. 1st edition. 2010.

This book tells the rules of designing simple and useful interfaces. It is not a collection of patterns or design examples that provide the inspiration of user experience system design, but it is a set of rules which you need to follow when you prepare to design the interface for digital devices. From this book, you can learn how to simplify user experiences when designing digital tools and applications.

8 **Universal Principles of Design**

By William Lidwell, Kritina Holden, Jill Butler

New Riders. 1st edition. 2011.

With rich illustration and easy navigation, this book introduces 125 ways to enhance the interface usability and make better design decisions. It explains every design concept with various visual examples of the concepts applied in practice. It can be used for designers to expand their knowledge and improve their design expertise.

Survey of Literature

9 **Designing for the Digital Age:
How to Create Human-Centered Products and Services**

By Kim Goodwin, Alan Cooper
Wiley. 1st edition. 2009.

This book provides many suggestions about how to design successful products and services in the digital age. Every section in this book is described in detail and richly illustrated with examples taken from real products, real clients, and real design problems. It provides a comprehensive scope of user experience in the digital age for designers to create human--centered products and services.

Online Resources

10 **Google's 2014 Travel Study:
App Mania has Ebbbed, yet Booking by Smartphone is Still Hot**

By Sean O'Neill
September 16, 2014
tnooz.com/article/google-research-travel-marketers-traveler-shopping-behavior/
Date of Access: September 19, 2014

This study displays several research data to show the changes of users' travel behavior, especially the changes of technology that people use for traveling. According to this study, smartphone apps are still favored, especially by business travelers. And cross-platform travel-planning is widespread. It is a useful study for designers to consider the devices which are used for making travel planner.

11 **Google Trip Planning Study: Devices, Web and Travel Video Impact**

By Karthick Prabu
November 22, 2013
tnooz.com/article/googles-study-multi-screen-usage-online-trip-planning-video-impact/
Date of Access: September 22, 2014

The purpose of this study is illustrating how trip planning behavior has changed over the past year through a lot of researches among the leisure and business travelers. It shows the travelers' behavior when preparing a trip, from determining the destination to booking flights and hotels. These data are important to design the user experience system for a travel application.

Survey of Literature

Travel Apps

12 **Tripit**

Tripit is a travel organizer that can help tourists organize their travel plans by simply forwarding all the hotel, flight, car rental, and restaurant confirmation emails to its email address. It can automatically transform the emails into a master itinerary, and tourists can view the plan anytime on any device. Also, it provides real-time alerts and notifies of the flight status.

13 **TouristEye**

Unlike the traditional travel planner which helps tourists organize a trip or find the best prices and options for the trip, TouristEye helps tourists build a wishlist of destinations. Tourists can add waypoints to the place where they would like to travel, and also can share this place list with friends or family. This application makes tourists be easy to find inspiration of places to go, to get ideas from trips of different sizes, and to get travel tips and experience from other tourists.

14 **TripAdvisor**

TripAdvisor is the quintessential travel planning service. It is not going to collect your travel information and help you to organize them to make a master travel itinerary. It provides a large amount of information, such as hotels, destination reviews, ratings, and photos. Integrating data from the travel process, this application provides comprehensive suggestions for tourists to have a better trip.

15 **WorldMate**

Like Tripit, WorldMate is a travel planner which can help tourists organize their travel itinerary and book hotels and flights. Using WorldMate, tourists can receive flight alerts and instantly find alternative flights. It provides all the vital information that tourists may need for managing, planning and organizing the trip. It is simple to use with beautiful interface design.

Design Ideation

According to a study on mobile design trends and guidelines in 2015 ^[2], this project was designed to show effective user experience process, simplified user interface, and interaction between screens and elements.

To design an effective and efficient user experience system, the development process was iterative. The revisions were made on the basis of user experiences and feedback. During the design process, all the visual elements of the app were designed in Adobe Photoshop and Adobe Illustrator. To better display this application, a prototype was created using Proto.io (an online prototyping tool) for usability testing. All the research related with this project and documents of the development process were uploaded to a project blog (<https://artrav.wordpress.com>).

Color Palette

The first step in the development process was designing the color palette. Based on the research on UI design trends, the usage of simpler color schemes became a trend after the introduction of flat design in 2013, which embraces clarity and simplicity.^[3]

Since this application was about art and travel, the main idea of the color palette was to present energy and happiness coming from the artistic travel and highlight the travel images in the application. Based on the main idea, the application used black and dark grey as background color to make the other colors and images stand out, while white and orange as highlight colors to represent creativity, enthusiasm and amusement. What's more, as a highlight color, orange had high visibility to catch user's attention and better present the important elements of interface design. This usage of a smaller number of colors made a clean look for the application interface.



White

CMYK 0/0/0/0

RGB 255/255/255



Grey

CMYK 67/59/56/6

RGB 102/102/102



Dark Grey

CMYK 79/74/71/45

RGB 51/51/51



Black

CMYK 0/0/0/100

RGB 0/0/0



Orange

CMYK 3/38/88/0

RGB 252/179/22

[2] Creative Workline. *Mobile Design Trends & Guidelines 2015* (blog).

<http://creativeworkline.com/2015/02/mobile-design-trends-guidelines-2015/>

[3] Oral, Onur. "Mobile: 2015, UI/UX Trends." Last modified July 31, 2015.

<http://medium.com/interactive-mind/mobile-2015-263ab694e60e#.hz4y0pv7v>

Design Ideation

Typography

In choosing the typography for this application, the main goal was readability. As a neo-grotesque sans-serif typeface, Helvetica Neue is clear and suitable, that can better show the content of this application, especially the brief information of cities and attractions. While using on the image, this typeface is more visible and clear to read. Also, this font family has various weights to give more possibility to design in the application and it's easier to form the hierarchy.

Helvetica Neue Light

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890

Helvetica Neue Regular

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890

Helvetica Neue Bold

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890

Helvetica Neue Condensed Bold

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890

Logo Implementation

The idea for the app name came from a combination of art and travel. As an app name, Artrav is obvious for users to understand the app's nature and function.

The main elements of the first idea for logo design were curved with decorated letter, which represented the freedom of travel and beauty of art. But the overall image did not show the desired effect. The design of different letters was hard to be coherent and unified, so it cannot give a delicate overall result for the app logo (Figure 1).

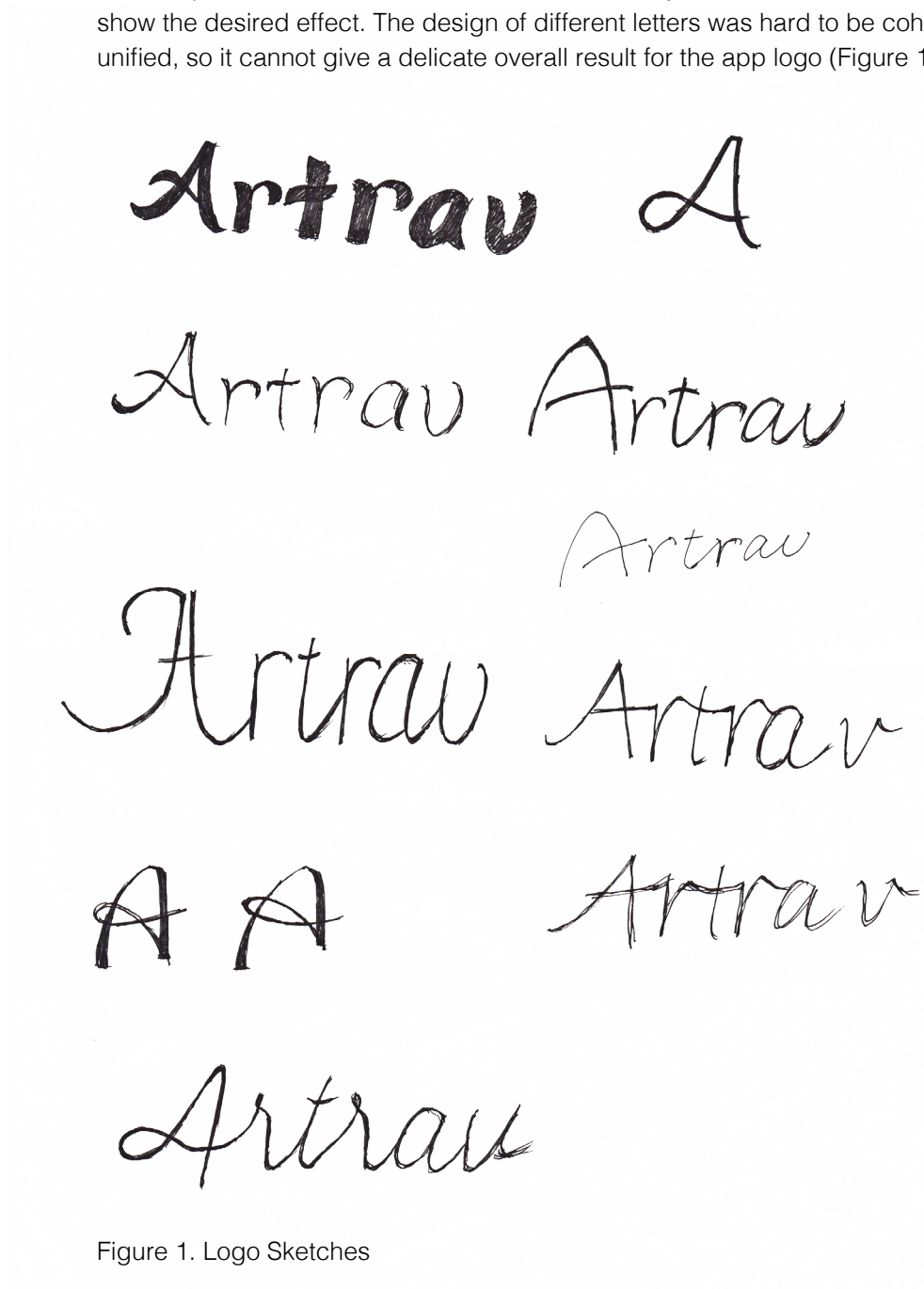


Figure 1. Logo Sketches

Logo Implementation

The elements of travel and art was another important consideration for logo design. These sketches implemented the idea of the combination of travel elements and art elements, for example, the combination of paintbrush and location symbol. However, some sketches looked similar to some existed brand of travel app and were short of uniqueness (Figure 2).



Figure 2. Logo Sketches

Logo Implementation

These sketches implemented the idea of the first letter of the app name and the two first letters of Art Traveler. Most logo designs were curved with decorated letter to represent the flight path (Figures 3–6). Some sketches seemed to be unique and could better represent the nature of this application.

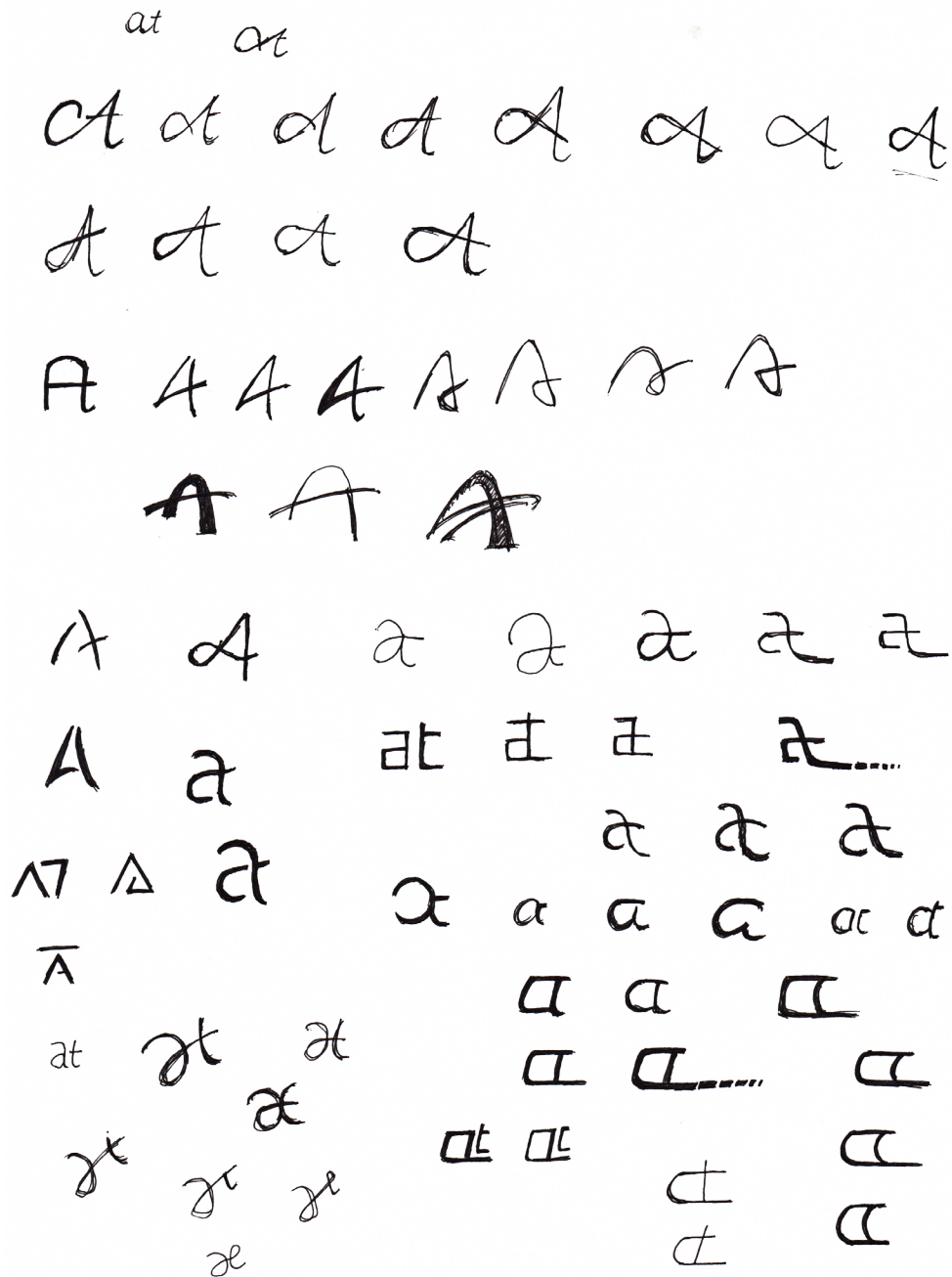


Figure 3. Logo Sketches

Logo Implementation

Artran*

A* A* 

  A* A*

  A A  

A  A 

At   

Figure 4. Logo Sketches

Logo Implementation

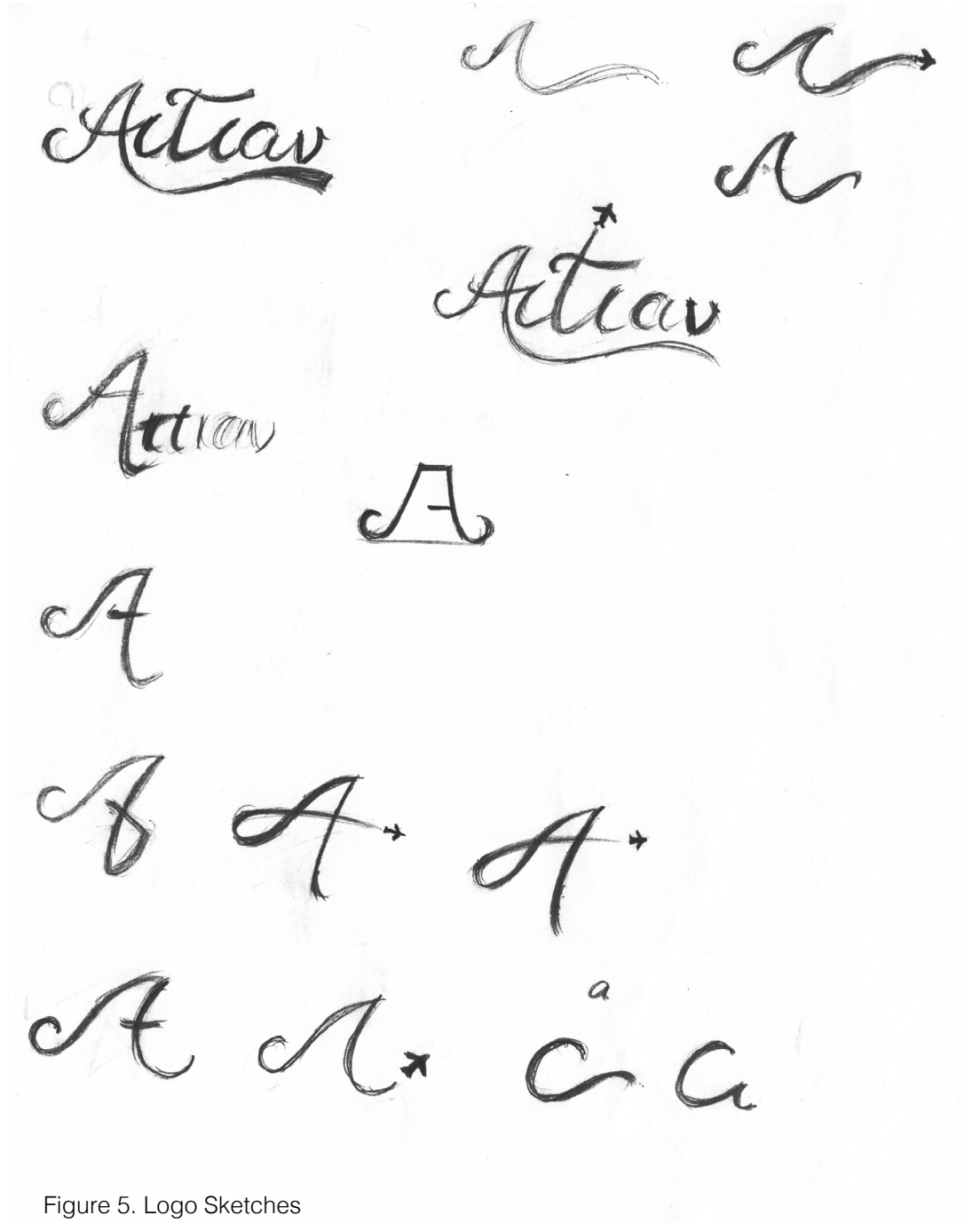


Figure 5. Logo Sketches

Logo Implementation

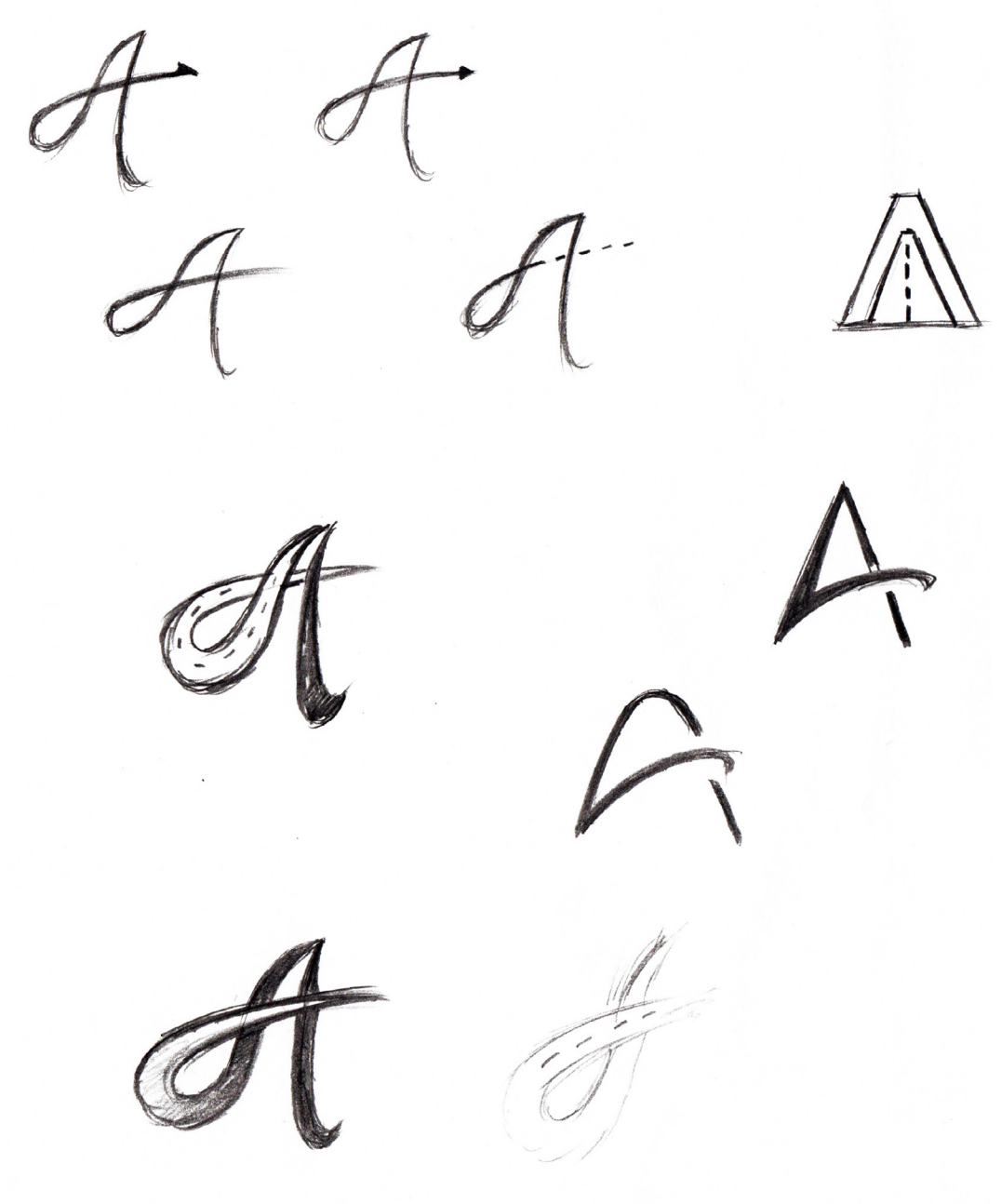


Figure 6. Logo Sketches

Logo Implementation

These sketches tried to combine the elements of travel or art with the first letter of the app name, for example, the combination of letter A and paintbrush or the flying aircraft. But most combinations seemed to be not coordinated and lack of integrity. They were hard to improve for further use for a mobile application (Figure 7).

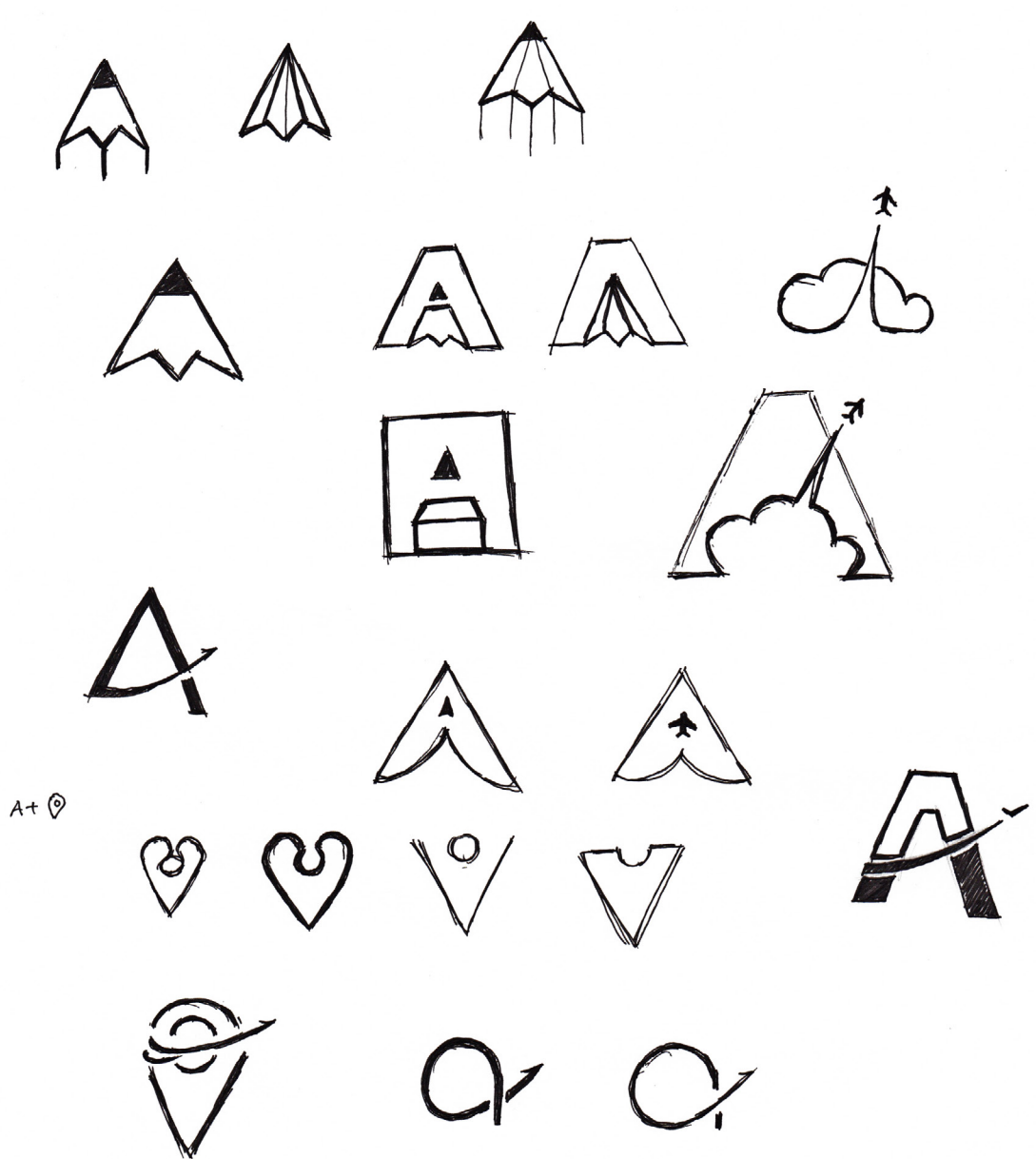


Figure 7. Logo Sketches

Logo Implementation

Based on previous pen sketches, these selected sketches were implemented in Adobe Illustrator. These sketches used different typefaces and combined different font weight for further development and to better represent the app (Figures 8 – 10).



Figure 8. Logo Sketches

Logo Implementation



Figure 9. Logo Sketches

Logo Implementation

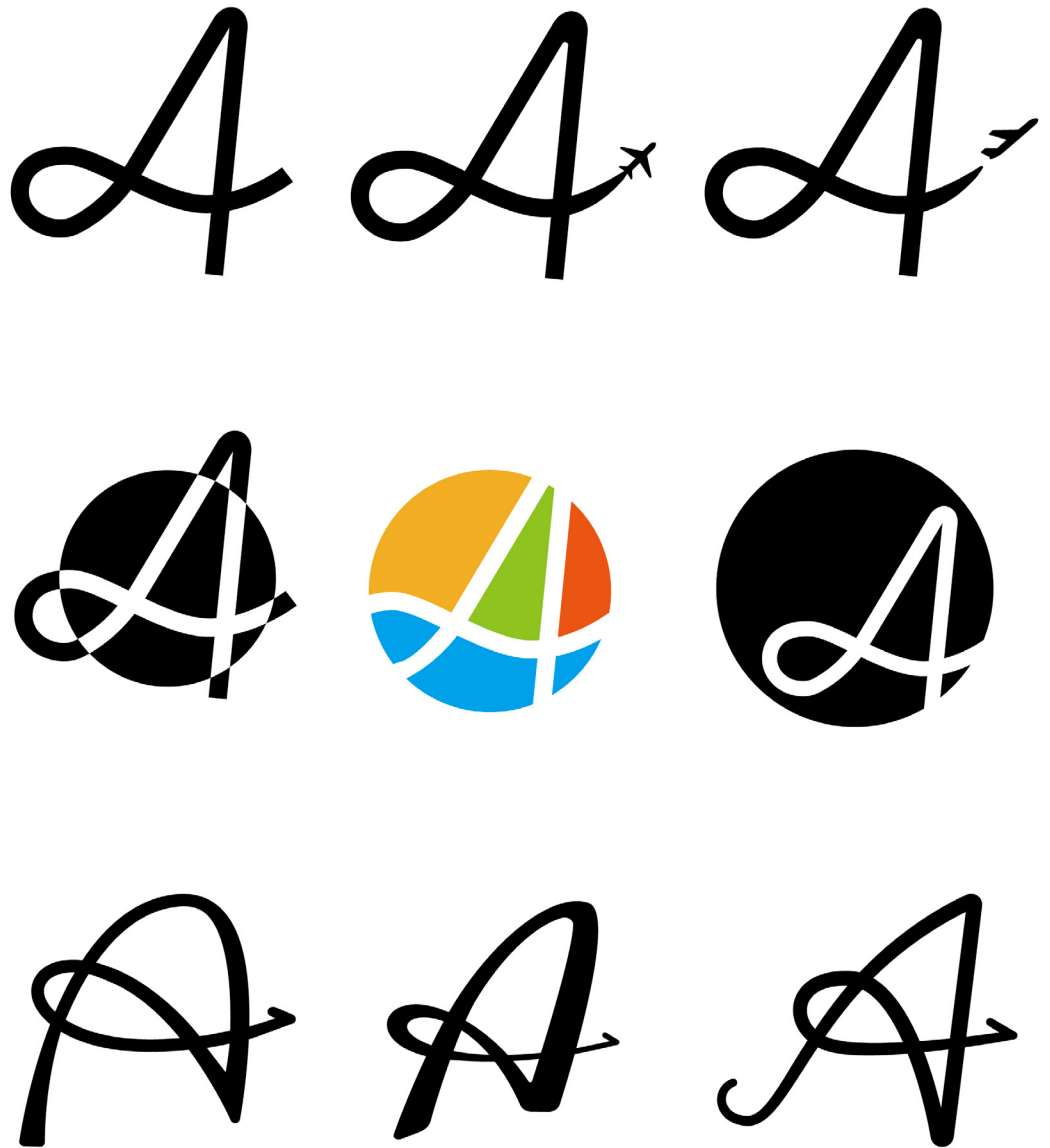


Figure 10. Logo Sketches

Logo Implementation

These versions of the logo design not only could demonstrate the characteristics of travel, but also had the form of art style (Figures 11–13). They were able to better represent the application. This was why they were chosen for further development.



Figure 11. Logo Sketches

Logo Implementation



Figure 12. Logo Sketches

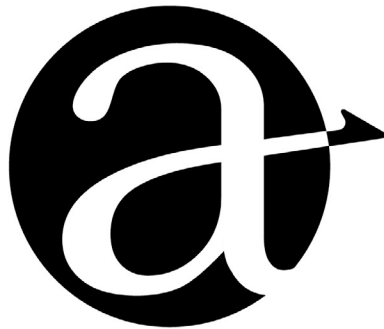
Logo Implementation



ARTRAV



ARTRAV



ARTRAV



ARTRAV

Figure 13. Logo Sketches

Final Logo Design

This final logo design combined the two first letters of Art Traveler. The overall design reflected the art style of the first letter of Artrav. And in the details, the orange arc and arrow, representing the travel path and direction, could better highlight the theme of tourism. In addition, the typeface of COCOMAT was selected for the brand typeface. With slightly rounded corners and geometric shape, this typeface made a softer, more contemporary and artistic look for the logo. Overall, the final logo could better reflect the artistic style and travel features (Figure 14).



Figure 14. Logo Sketches

User Research

User Workflows

Designing user workflows is an important process to create an effective and efficient user experience system. The user workflows can help to better understand users' needs and their usage habits. According to a study on cultural tourism typology ^[4], tourists can be divided into different types based on centrality and depth of experience.

- 1 The purposeful tourist
This kind of tourist has a major reason for traveling. Sometimes they clearly know their travel destination. Sometimes they know what they need to see or get from traveling. For example, a design student, who studied a specific aspect of art, needs to do some research for the project while traveling.
- 2 The sightseeing tourist
Learning something from visiting places of interest is their major reason for traveling. This kind of tourist has a more entertainment-orientated experience and they can know something new from sightseeing. For example, an art beginner, who begins to have an interest in art, selects to visit the famous art cities to know more about art.
- 3 The casual tourist
This type of tourist does not have clear travel destinations. Sometimes they just want to travel nearby to relax. Sometimes they arbitrarily decide their tourist destinations to enjoy in a different environment, such as the artists who want to get inspirations from a different culture.

Considering different situations of different users in the process from deciding travel destinations to making travel plans, the user workflows were made as following:

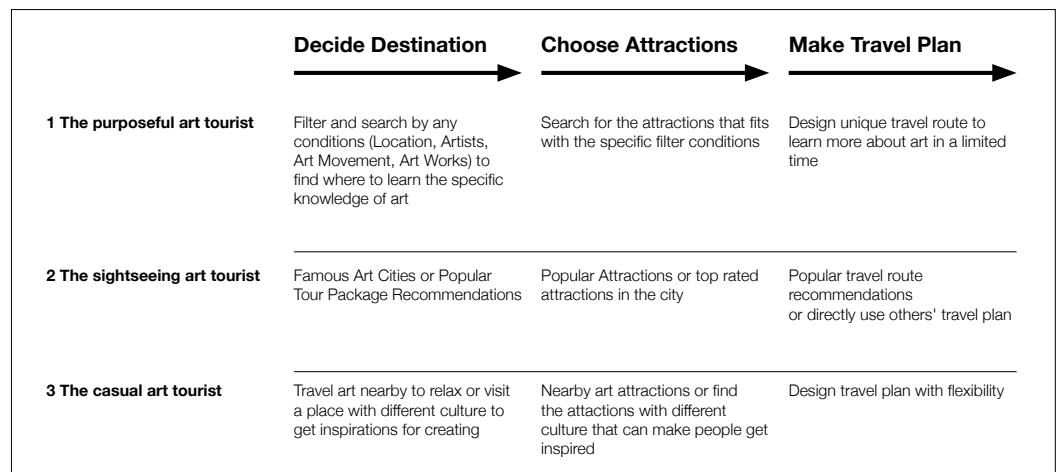


Figure 15. User Workflows

[4] Mckercher, Bob, and Hilary du Cros. "Testing a Cultural Tourism Typology." *International Journal of Tourism Research* 5 (January 2003): 45–58.

User Research

Target Audience 1

Tina Milner

Art Beginner

"Art comes from life and life is full of Art. I want to see more works of art and become more cultured about art from traveling."

Personal Information

Age: 26

Location: San Francisco, CA

Education: Master's in Marketing

Interests: Playing piano, Yoga, Watching movies

Personality: Outgoing, Passionate, Social, Love to try new things

Goals and Tasks in Relation to App

Know little about art, and want to know more during traveling. Hoping to find an appropriate tourist destination, and to develop a reasonable travel plan through a travel application, in order to better appreciate art and be cultured about art.

Challenges

Hard to decide travel destination from too many places.

Hard to select attractions from different types.

How to arrange the travel time reasonably?

What Can We Do

Provide recommendations for art traveling, including art cities, art attractions and popular travel plans.

Provide a new way for tourists to find their interested art style, and the right place to visit and learn more about art.

Provide more ways for tourists to know attractions, such as estimated travel time, star rating and artworks included.

User Research

Target Audience 2

Nancy Temple

Art Student

"Art is an indispensable part of my life. My pursuit of art is never enough, whether in learning, or while on vacation travel."

Personal Information

Age: 21

Location: Rochester, NY

Education: BA Graphic Design

Interests: Drawing, Reading, Sewing, and Playing guitar

Personality: Easygoing, Passionate, Cheerful, Talkative

Goals and Tasks in Relation to App

Art is a course of study, but also an enjoyment of life. Travel not only can relax, but also can learn more knowledge of art. Quickly find the right place to learn and do research on art for the specific design project is the most important purpose.

Challenges

Hard to find the right place related with the specific design project.

Hard to know how many attractions meet the requirements of the art research in a city.

Hard to quickly know artworks included in the museum or art gallery.

What Can We Do

Add functionality of filter and search to provide convenience for a quick search to the specific location, art style, and artistic works.

Provide data for search results to show the amount of interest matching the search criteria clearly.

In the information page of attraction, show some images that represent different art styles from the museum or art gallery.

User Research

Target Audience 3

Jerry Perkins

Artist

"Art is a pleasure, the most fascinating enjoyment. I will continue to find the beauty of art in my life, and show its best side to everyone."

Personal Information

Age: 36

Location: Pittsburgh, PA

Education: Master's in Fine Arts

Interests: Drawing, Reading, Surfing online and traveling to look for creation inspiration

Personality: Passionate, Knowledgeable, Easygoing

Goals and Tasks in Relation to App

Traveling is a good way to appreciate art. In order to better create, usually need to do more research and get more inspiration from traveling. Hoping to find the attractions that are helpful for getting inspiration and doing research on a specific aspect of art.

Challenges

Hard to find the right place related with the art research.

Hard to know which attraction is suitable for getting inspiration for the next creation.

What Can We Do

Provide a convenience way to quick search for a specific art style and the attractions related with this art style.

Provide more information on the art of selected attraction.

App Planning

Process Flowchart

Based on previous user research, this application helped to arrange users' travel from two aspects. The one was deciding travel destinations, and the other was making a travel plan. So in order to provide an effective and efficient user experience system, this application was designed into four parts. Those were deciding travel destinations, making travel plans, travel community, and personal setting.

According to the user research, different types of users had different requirements when they arranged their travel. Considering the users workflows, this application provided four ways for users to decide their travel destination. For the art beginner, this app provided famous art cities for them to explore. For the art students studied in a specific aspect of art, they could find their travel destinations through filtering different conditions and searching. For the casual artist, they could locate any art attractions nearby. Also, this application provided a new way for users to discover their artistic style and find the attractions they might be interested in.

Part 1. Decide Travel Destinations

- 1 City Recommendations -----> Different Types of Attractions -----> Select Attractions -----> See Attraction Information -----> Save Attractions
- 2 Filter and Search -----> Select Location/Art Movement/Artist/Art Works -----> Search Result -----> Choose Attractions -----> See Information -----> Save Attractions
- 3 Locate Art Nearby -----> Select Attractions -----> See Information -----> Save Attractions
- 4 Discover an Artistic Style -----> Choose Favorite City Style -----> Choose Favorite Art Style -----> Discover Result -----> Choose a City -----> Choose Attractions -----> See Information -----> Save Attractions

App Planning

To make a travel plan, this application provided two ways for users to select. They could create a new trip and designed the travel route by themselves. Or they could directly use others' travel plan that were shared in the travel community.

Travel Community was a social platform for users to share their travel plan, rate different plans, and see others' travel plan and save it for future use.

The final part was the personal setting to make users easily manage their profile.

Part 2. Make Travel Plan

- 1 Create a New Trip -----> Enter Trip Name and Time -----> Put Saved Attractions into -----> Different Travel Days -----> Change Transportation -----> Share Travel Plan
- 2 My Favorite Travel Plan (Saved from Travel Community) -----> Select Travel Plan

Part 3. Travel Community

Select Travel Plan -----> Detailed Information of Travel Plan -----> Save it to My Favorite

Part 4. Personal Setting

Edit Profile -----> Change Login Password -----> Log Out

App Planning

App Flowchart

Based on the previous research and analysis, the app structure was designed as following (Figure 16).

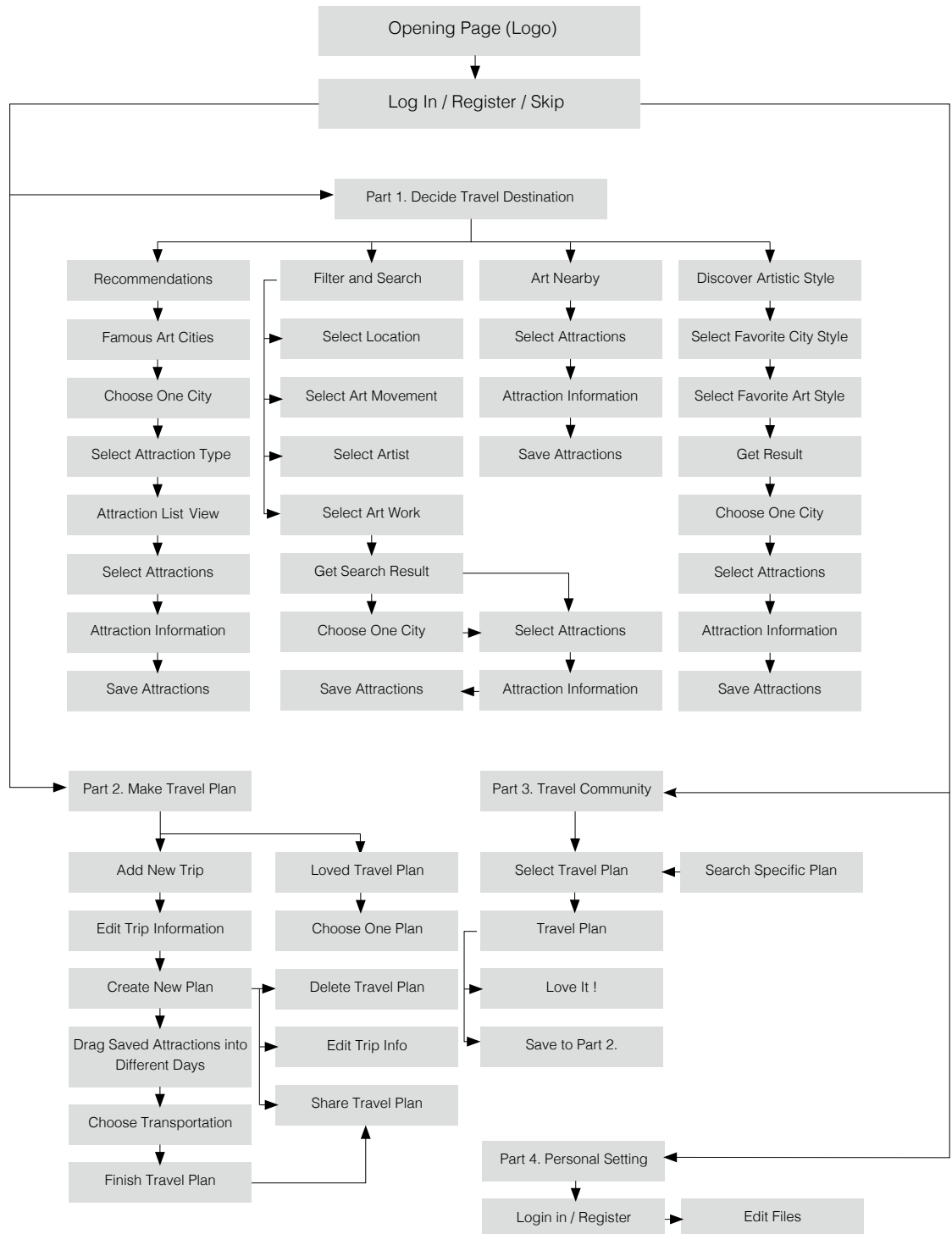


Figure 16. App Planning

App Design Implementation

Wireframes

On the basis of the previous app planning, the wireframes were designed to help users complete their transactions in this application easily and quickly. Designing the user experience system with shorter user flows can minimize the effort for users and increase the effectiveness to operate the app.

Based on the goal of simplified user interface, this wireframe aimed to display simplicity and clarity in visual design languages. The home page of finding travel destination used list form to divide different ways for users to select, while the hide functionality of the hamburger button provided more room for the finding way list (Figure 17). Also, this kind of hidden navigation kept the screen free of clutter.

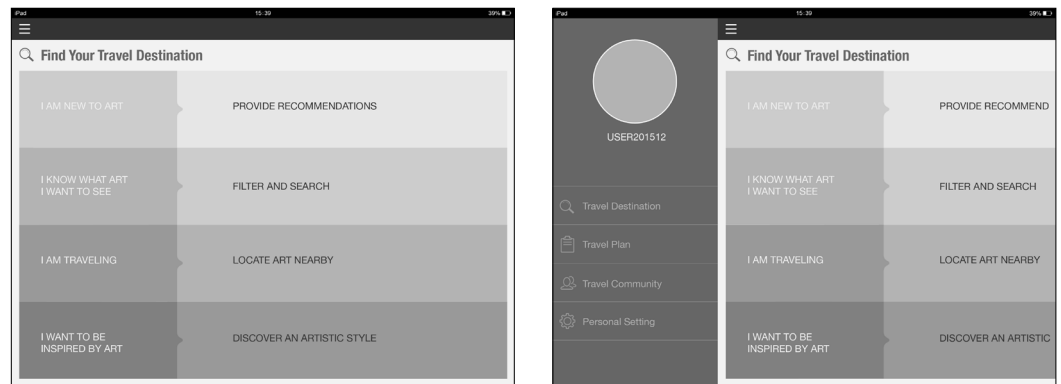


Figure 17. Find Travel Destination Wireframes

To achieve the goal of helping people enjoy their art tour and know more about art, the wireframes for providing recommendations were designed to show more information and images of art attractions and artworks in the city (Figure 18). Also, through swiping the screen to change different city recommendations, this application increased interaction with users by positioning the screen more than a touch target.

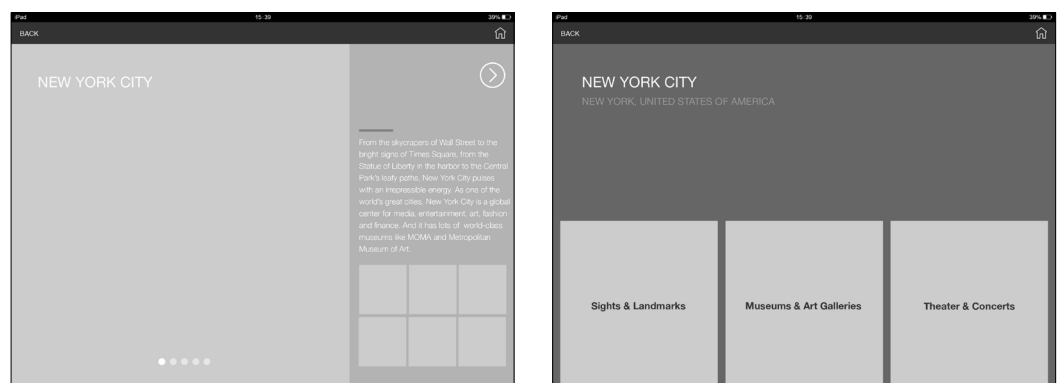


Figure 18. Provide Recommendations Wireframes

App Design Implementation

As Android stated in their Design Guidelines, pictures are faster than words ^[5]. For a travel app, the images list played a significant role in displaying cities, attractions, artworks and so on. To minimize users' effort for using this app, the wireframe of each attraction image was designed with its name, popularity, estimated travel time and distance. Users could get a brief information from the image list instead of getting it after tapping the item (Figure 19).

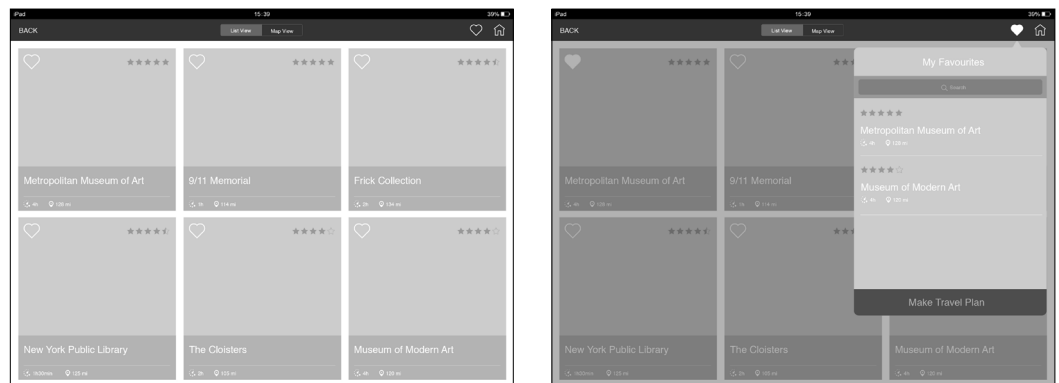


Figure 19. Attraction List View Wireframes

In addition to the attractions list, cities list was also commonly in this app. Unlike the attractions image list, the city image list was designed without any detailed information just the city name which left a bigger image room for users to appreciate and select their favorite travel destinations (Figure 20).

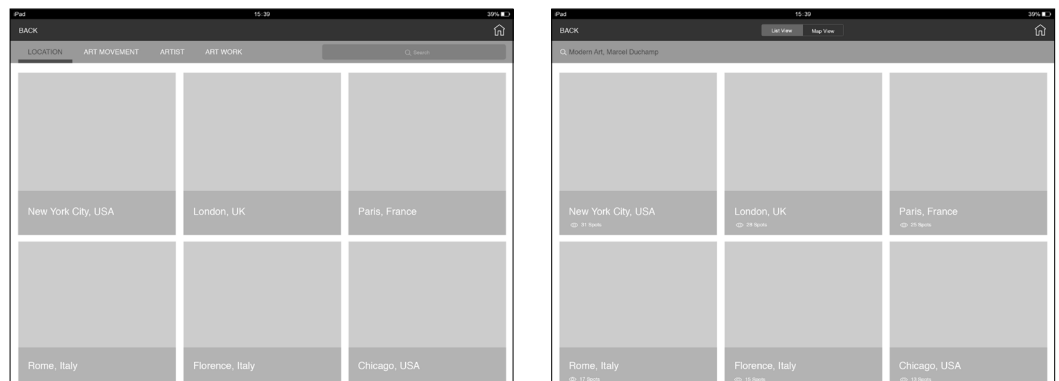


Figure 20. Filter and Search Result Wireframes

[5] Android. "Android Design Principles." www.developer.android.com/design/get-started/principles.html

App Design Implementation

The map page was an auxiliary page for the list view, which helped users know their current location and the general distribution of attractions or cities (Figure 21). The wireframe of the map was also widely used in this travel application, including the distribution map of different attractions, the map showing the result of filter search or discover artistic style, and the map with current location to show art nearby.

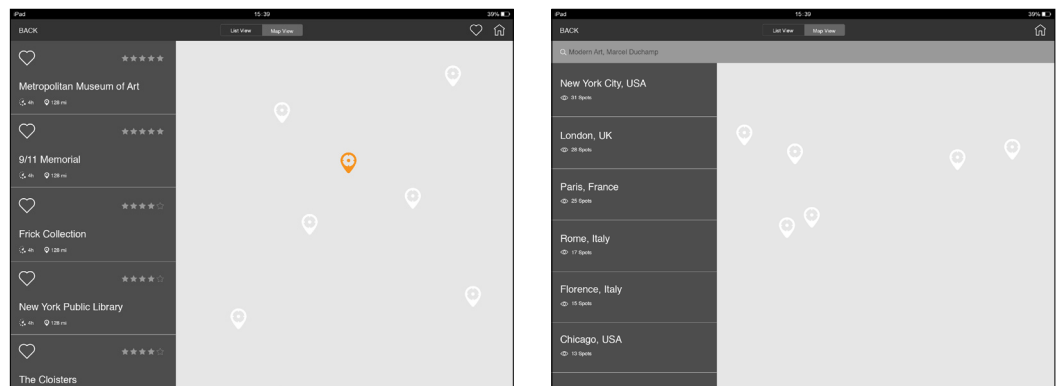


Figure 21. Map View Wireframes

The attraction page contained more detailed information than the attractions list page, such as the brief introduction, the opening hours and artworks (Figure 22). The overall layout kept consistency with the previous pages, which was of simplicity and clarity. The layout design with similarity would help users quickly become familiar with this app and easily learn to use it.

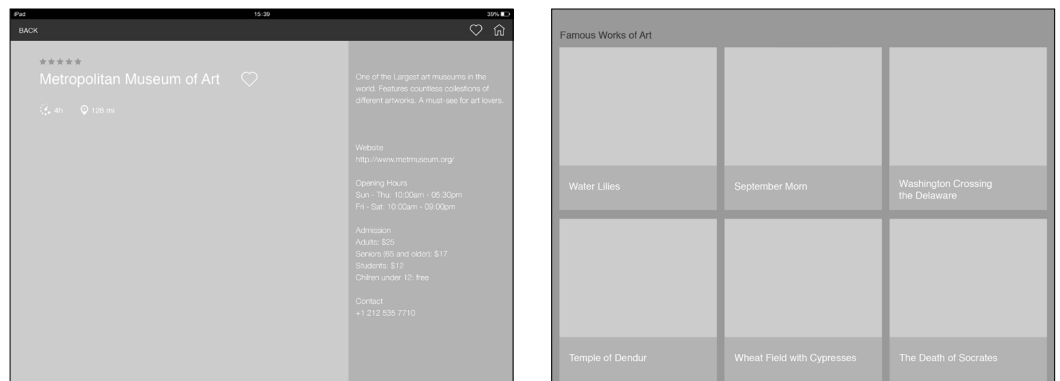


Figure 22. Attraction Page Wireframes

App Design Implementation

Based on the previous user research, this application provided two ways for users to make their travel plan. They could directly use others' travel plan which was shared in the social platform and saved into favorite travel plan in this page. Also, they could design their own travel route by creating a new plan (Figure 23). When creating a new trip, users could decide their travel time later in the travel plan page.

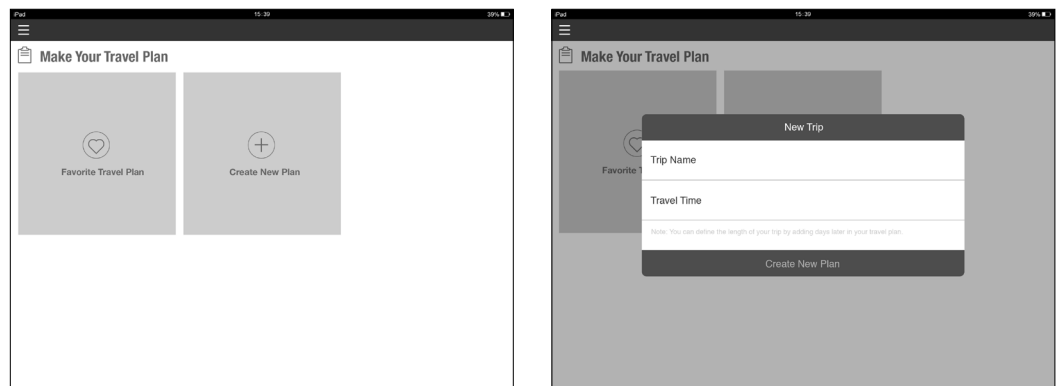


Figure 23. Make Travel Plan Wireframes

After creating a new plan, the image representing the travel destination would show in the page with the trip name and travel time. Also, a hidden button was designed in the right top corner of the new plan, helped users to quickly share their travel plan, edit travel information, or delete this plan (Figure 24).

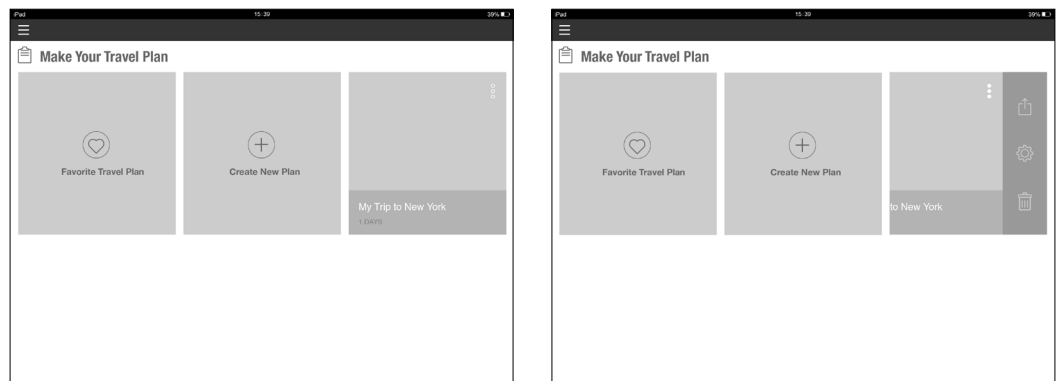


Figure 24. New Travel Plan Wireframes

App Design Implementation

To keep simplicity and clarity, the wireframe of travel plan was designed into several columns. The first column displayed the attractions saved before while others showed attractions that users would visit in different travel days. This kind of list form helped to classify items and made the screen clean and clear to find information (Figure 25).

After dragging attractions into different travel days, users also could change their transportations to connect different places. The finished travel route showed attractions, connecting transportation, the distance between attractions, and estimated travel time.

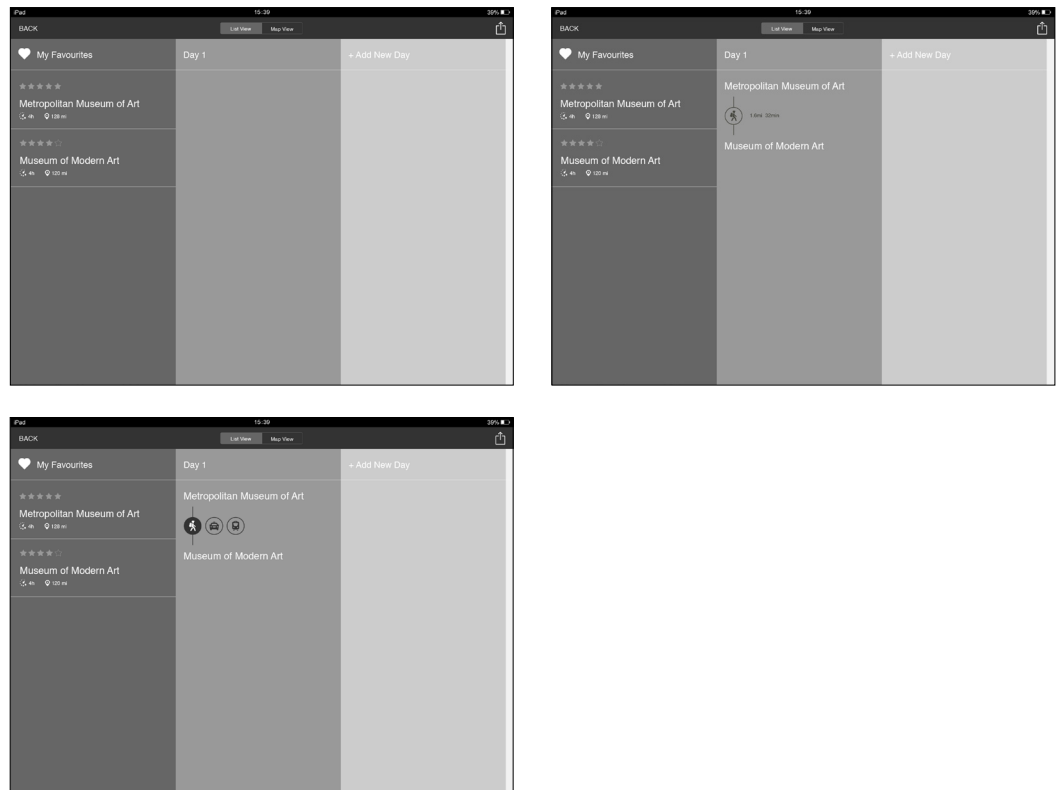


Figure 25. Travel Plan Wireframes

App Design Implementation

The design for travel community wireframe kept consistency with the previous design, using the form of neat and clean images list. The travel plan shared in travel community displayed in two ways. The one was image view and the other was list view. Users could get a general impression of the city through image view, and get the overall trip planning and estimated travel time from list view (Figure 26).

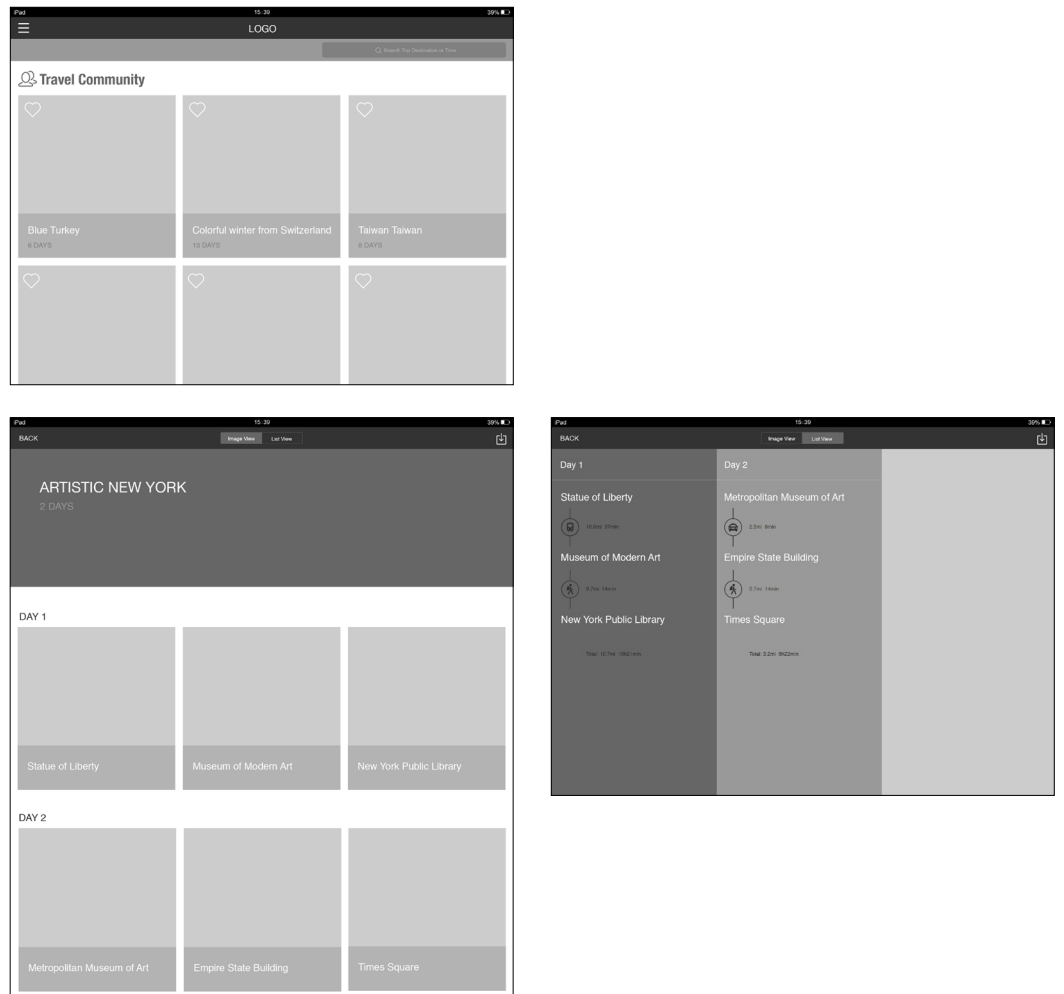


Figure 26. Travel Community Wireframes

App Design Implementation

Personal setting was designed for users to edit their profiles, including their photos, basic user information and login password (Figure 28). To go to this part, users need to log in at first with a Facebook account or email address. The login page displayed at the beginning of this application as a welcome page (Figure 27). If users skipped this step at the beginning, they also had an opportunity to log into their account when choosing to explore personal setting.

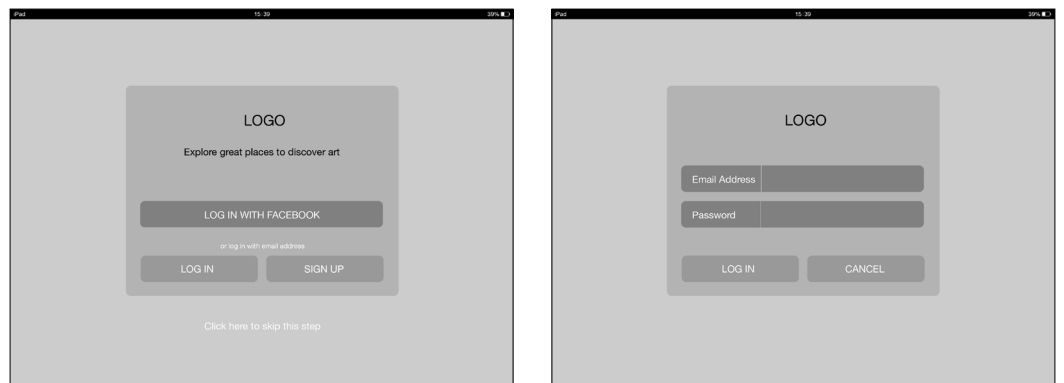


Figure 27. Login Page Wireframes

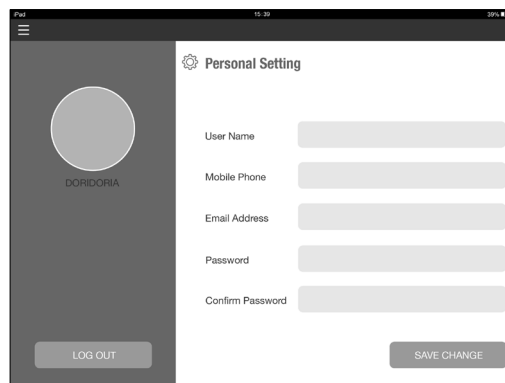


Figure 28. Personal Setting Wireframes

App Design Implementation

Visual Design

Home Page Style

The first version of the background image for the application was a fuzzy travel photo, which represented the travel nature of this app. However, this design resulted in an imbalance between art and travel. It was hard to recognize art from this page. That's why the photo was not chosen for the final visual design (Figure 29).

The second version was the one with watercolor style background. This version transformed the previous travel photo to the style of watercolor, which was of more artistic sense. However, this style looked muddy and was short of contrast. Therefore, this style was not chosen for the final design, too (Figure 30).

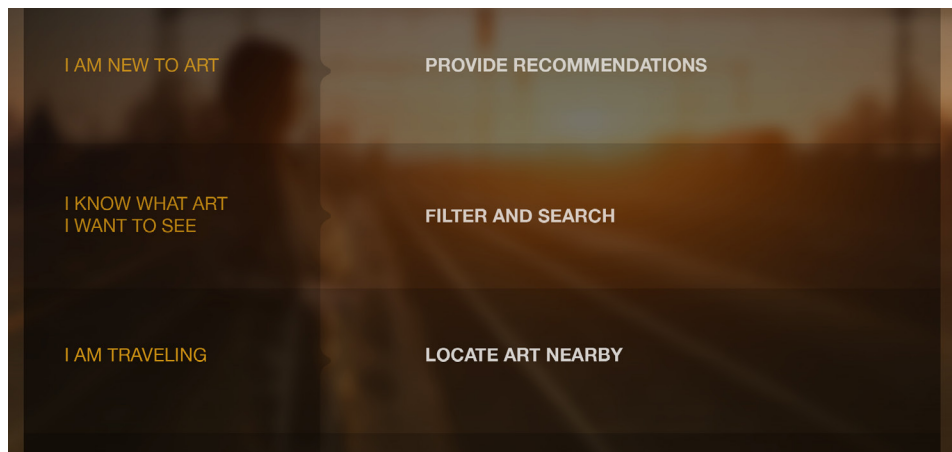


Figure 29. Home Page Option 1

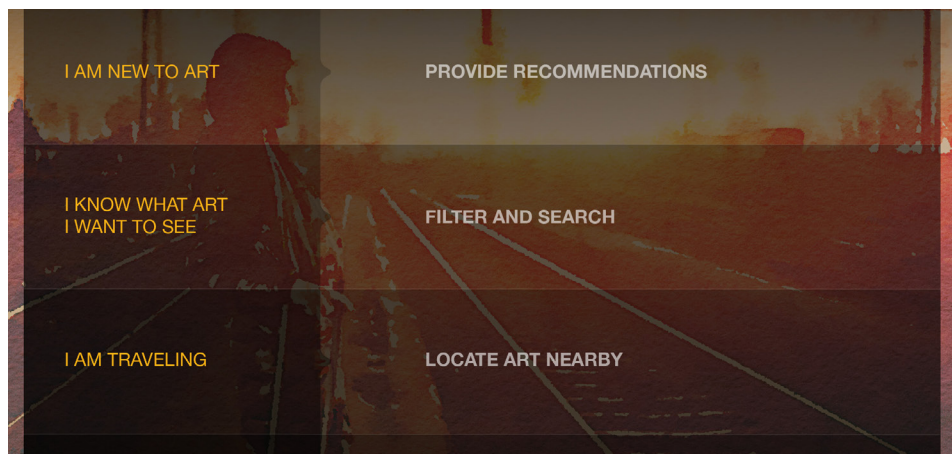


Figure 30. Home Page Option 2

App Design Implementation

Visual Design

Home Page Style

The final version of the background image design used oil painting style instead of watercolor to increase the image's contrast and edge sharpness. Also, the image changed from the scene of a railway, which limited the scope of travel, to the scene of art city traveling. This version could reflect travel and art nature at the same time. It was a good choice for the final visual design (Figure 31).

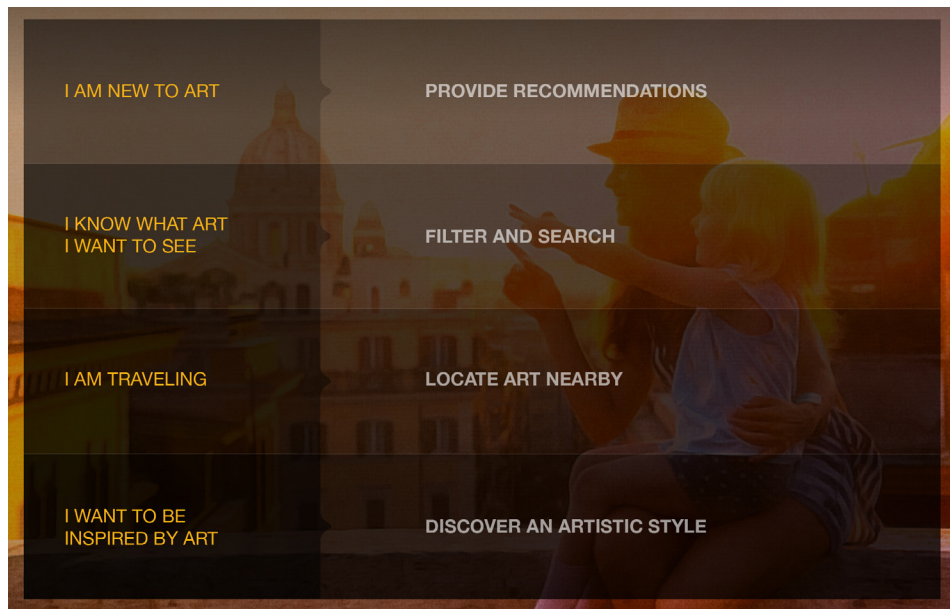


Figure 31. Home Page Option 3

App Design Implementation

Visual Design

Image List

Considering the same factor as the background image of home page, the image list used images with watercolor style (Figure 33) instead of city photo (Figure 32) at first to better reflect the art and travel nature of this application.

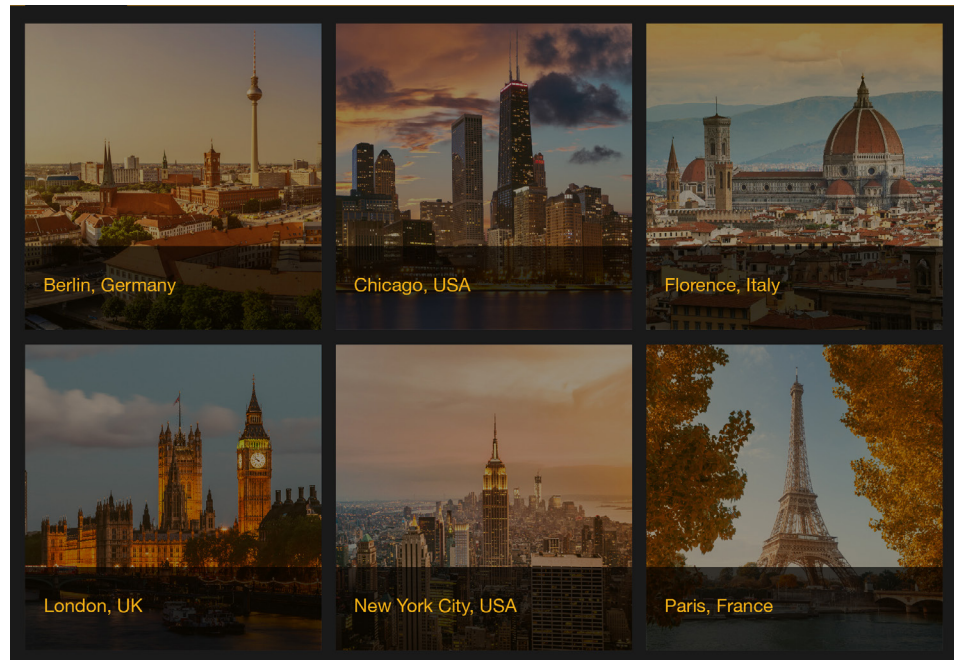


Figure 32. Image List Option 1

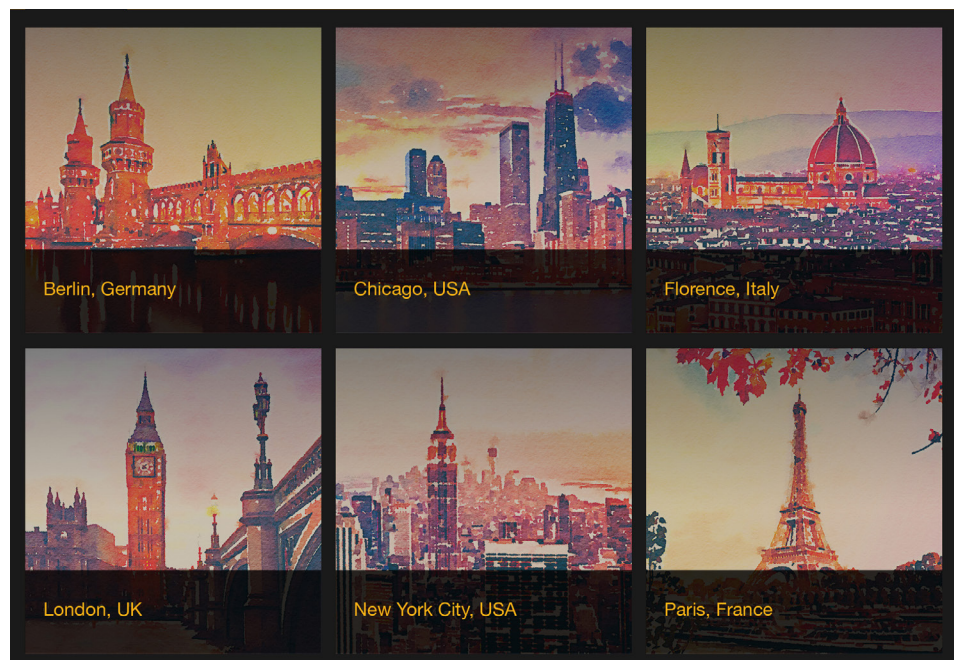


Figure 33. Image List Option 2

App Design Implementation

Visual Design

Image List

To keep consistency with the overall style, the final version of image list (Figure 34) used oil painting style to show different cities. The oil painting images were clearer and brighter than the previous versions that could better attract users' attentions.

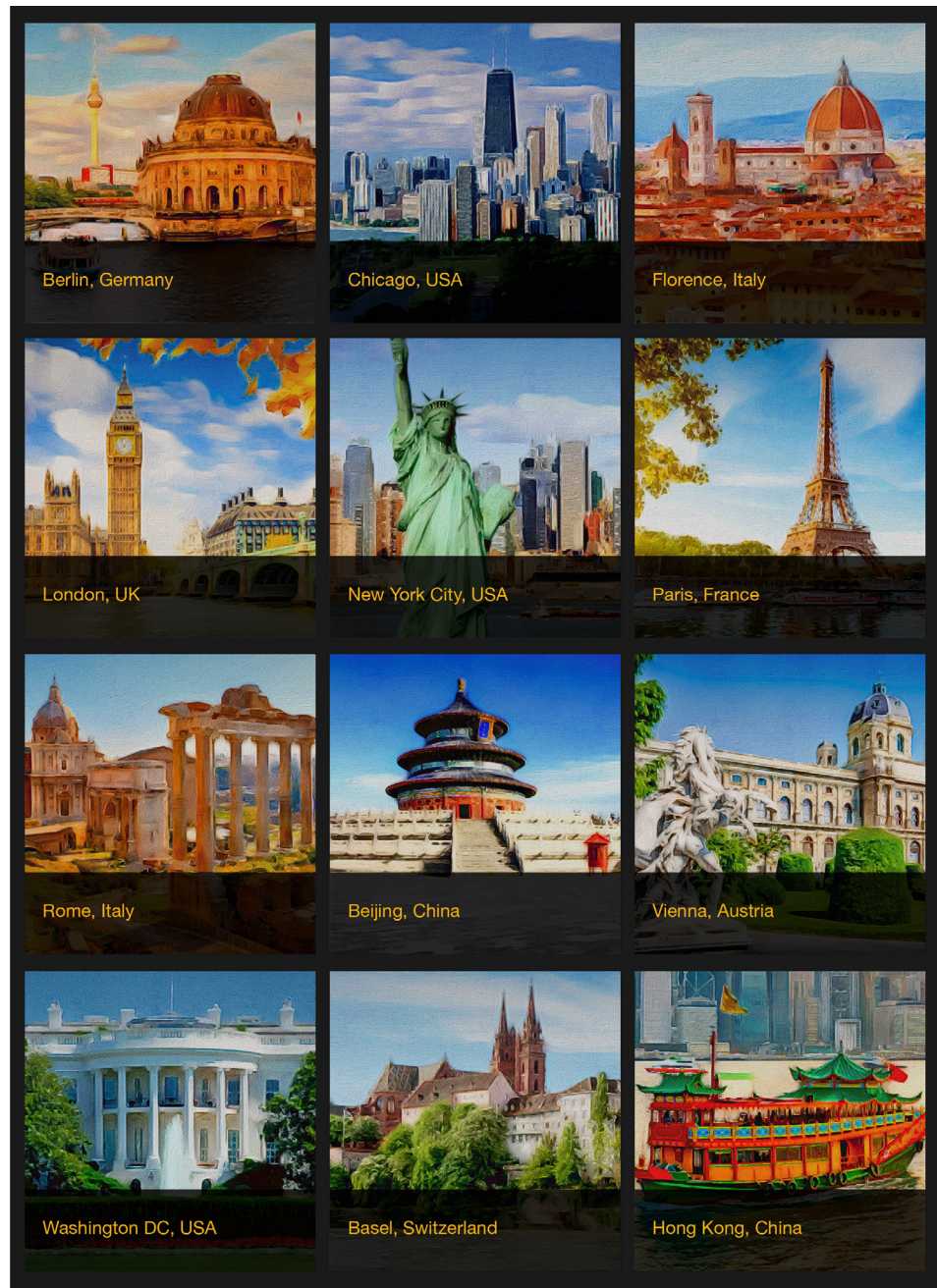


Figure 34. Image List Option 3

App Design Implementation

Visual Design

Attraction Type

The first version for buttons of different attraction types was simple with typography. But the typeface seemed too small in the middle of the large button, that left a huge blank in the page (Figure 35). To fill the blank of the button and better represent each attraction type, these buttons were designed with icons in the background. Although these icons could represent different attraction types, the design with low transparency made it unclear and unobvious. Also, the bold line of these icons was inconsistent with the overall style. As a result, it was not adopted for the final visual design (Figure 36).

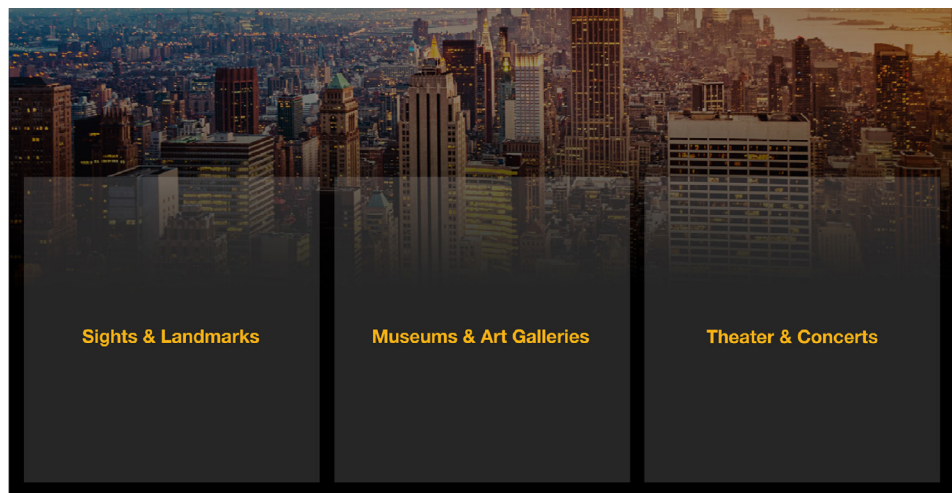


Figure 35. Attraction Type Option 1

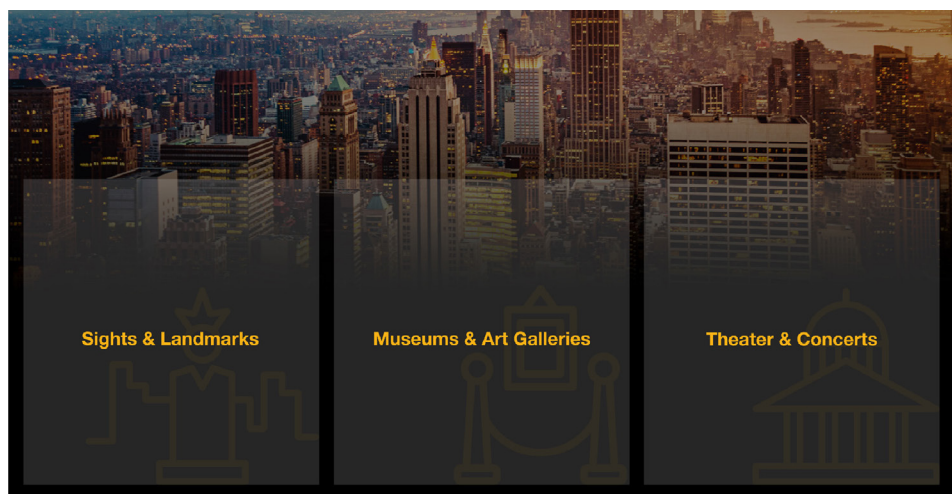


Figure 36. Attraction Type Option 2

App Design Implementation

Visual Design

Attraction Type

The third version for attraction type button used images with watercolor style to highlight the art of this app and represent different attraction types. The images with watercolor style showed the features of different attraction types well. However, the overall effect was blurred. The color of the background and the color of attraction types images was close that users would be difficult to clearly distinguish each button (Figure 37).

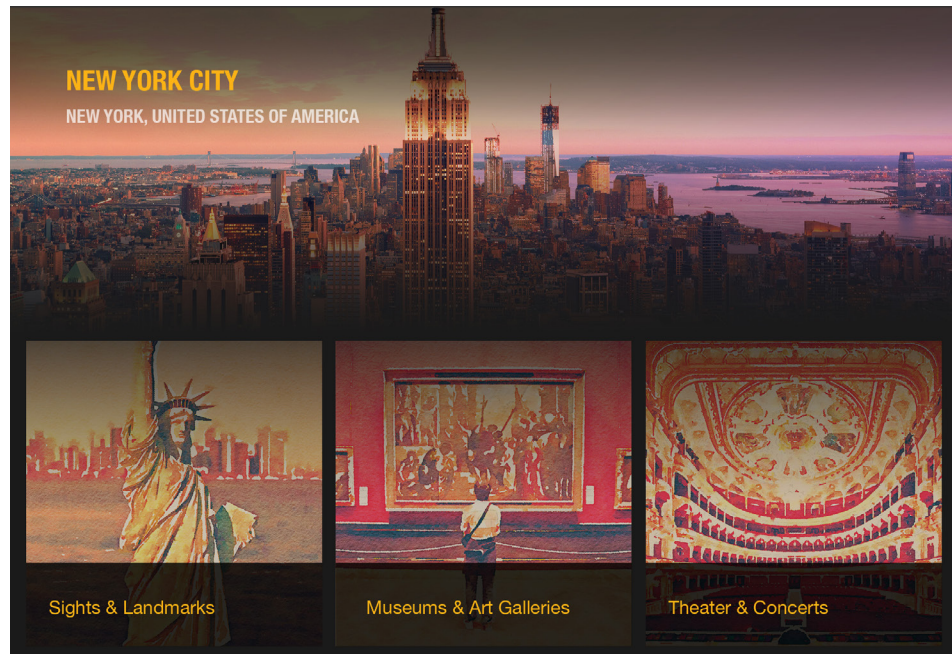


Figure 37. Attraction Type Option 3

App Design Implementation

Visual Design

Attraction Type

The final version changed the background color into black and white to make a distinct color difference and better highlight the attraction types images. Also, the images used oil painting style to better show the features of different attractions and make users easy to distinguish different types. Compared with previous versions, the final version not only can represent the theme of art and travel well, but also was clear enough to make users distinguish different types of attractions (Figure 38).

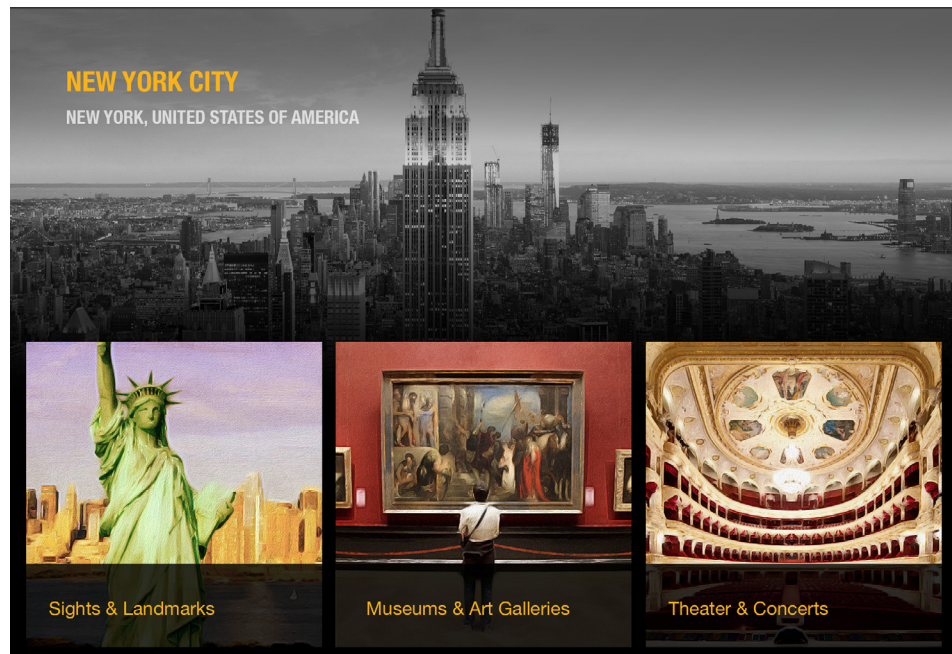


Figure 38. Attraction Type Option 4

App Design Implementation

Visual Design

Map Design

The map page in this application was designed to help users know the approximate location of the attractions. It was an auxiliary page of attractions list page. To better showcase the area of travel destination, several map designs were implemented.

The first design for the map was dark and graphic with different degree of grey. The main area for travel was highlighted with light grey and more details. However, this style of map was inconsistent with other pages and the overall color style (Figure 39).

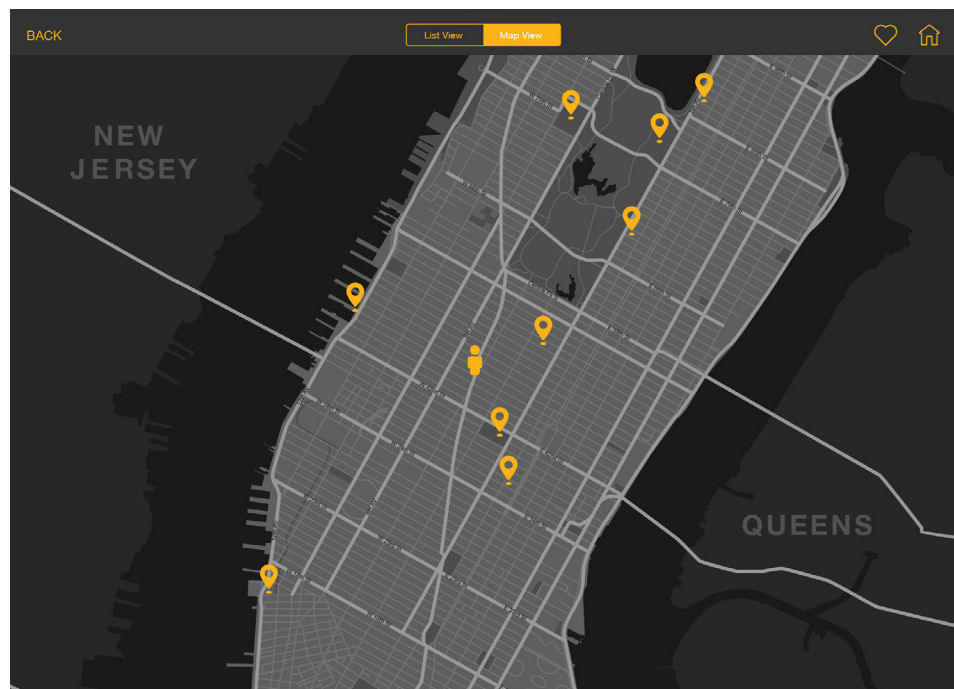


Figure 39. Map Design Option 1

App Design Implementation

Visual Design Map Design

The second version of map design changed the background of map into watercolor style to show different possibilities. Instead of dark map design, the second version used orange color in the main area to make it stand out (Figures 40–42). Although this idea could better highlight the travel area, the location spots would be hard to recognize and be distinguished from the orange map.



Figure 40. Map Design Option 2

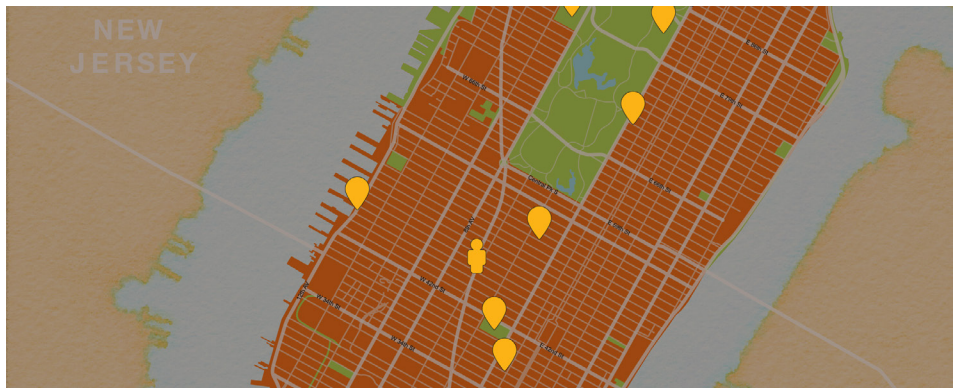


Figure 41. Map Design Option 3



Figure 42. Map Design Option 4

App Design Implementation

Visual Design

Map Design

In order to make the main travel area stand out and also highlight the attractions spots in the map, the third version reversed the color of the previous design. In this way, the graphic grey area could stand out from the watercolor background, while the orange attractions spots could be obvious to recognize (Figures 43–44). The new challenge came out from this version was the color of park and lake. To simplify the map and better show the attraction location, the bright green or blue color was not suitable for this map.



Figure 43. Map Design Option 5



Figure 44. Map Design Option 6

App Design Implementation

Visual Design Map Design

The final version for the map design summed up the advantages and disadvantages of the prior design. In addition, to better fit with the grey color of the main area, the color of park and lake changed to dark green and blue. In this map, the background of map used oil painting style instead of watercolor to make consistency with the overall style, and this oil painting background made the graphic grey area stand out, while the orange color highlighted the attraction spots in the dark grey area (Figures 45–46).



Figure 45. Map Design Final Version 1

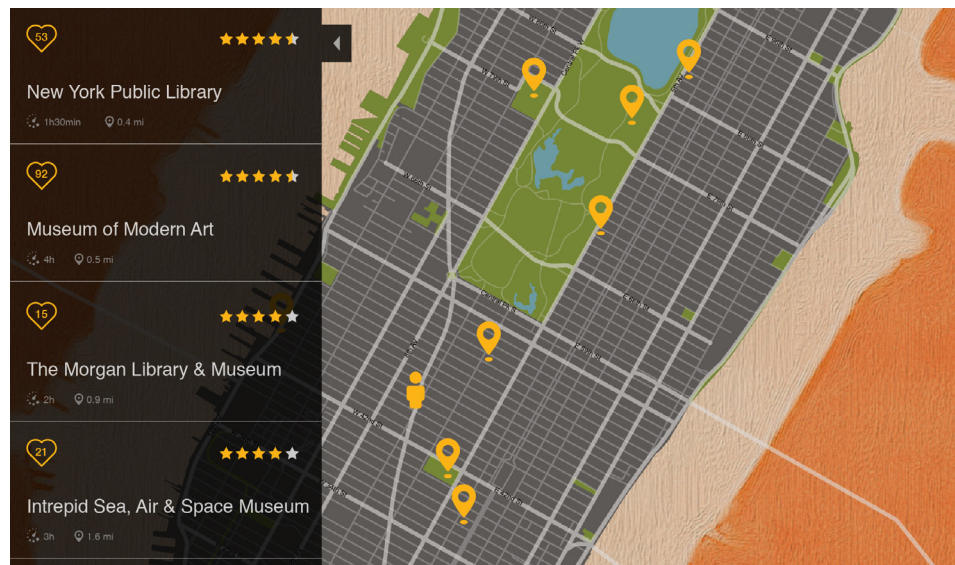


Figure 46. Map Design Final Version 2

App Design

Welcome Page

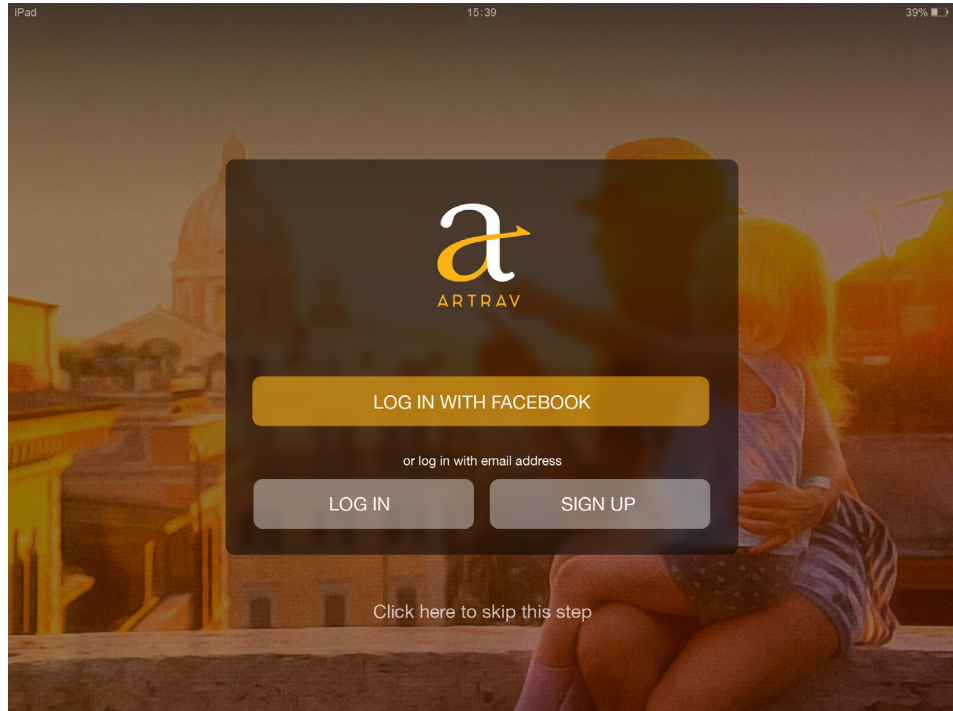


Figure 47. Welcome Page

Log In Page

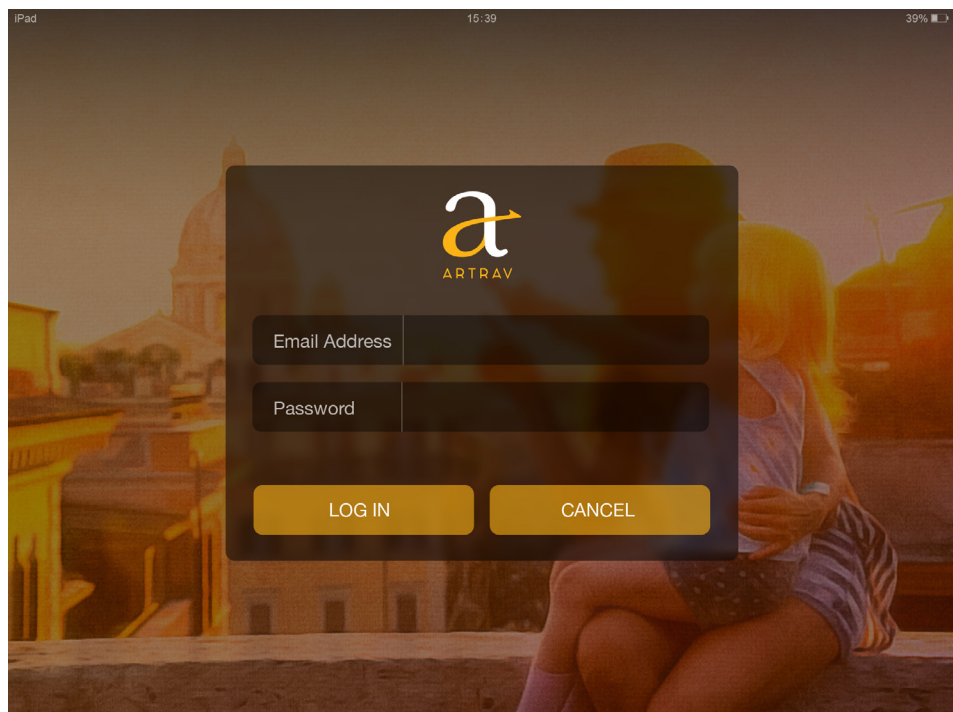


Figure 48. Login Page

App Design

Personalisation for Home Page

Considering different needs of different users, this application provides four ways for users to find their travel destination (Figure 49). For the art beginners, this application provides recommendations of famous art cities to explore art. In addition, they can also discover their favorite artistic style to get inspiration for a travel destination. Additionally, for the purpose of design research, art students or artists can find their research location by filter and search. While traveling, users can also locate art nearby to decide their next visit.

These four ways are distinguished by different transparency overlay to keep this page clean and efficient for users to operate. The background image keeps the same as the welcome page for the consistency of overall style.

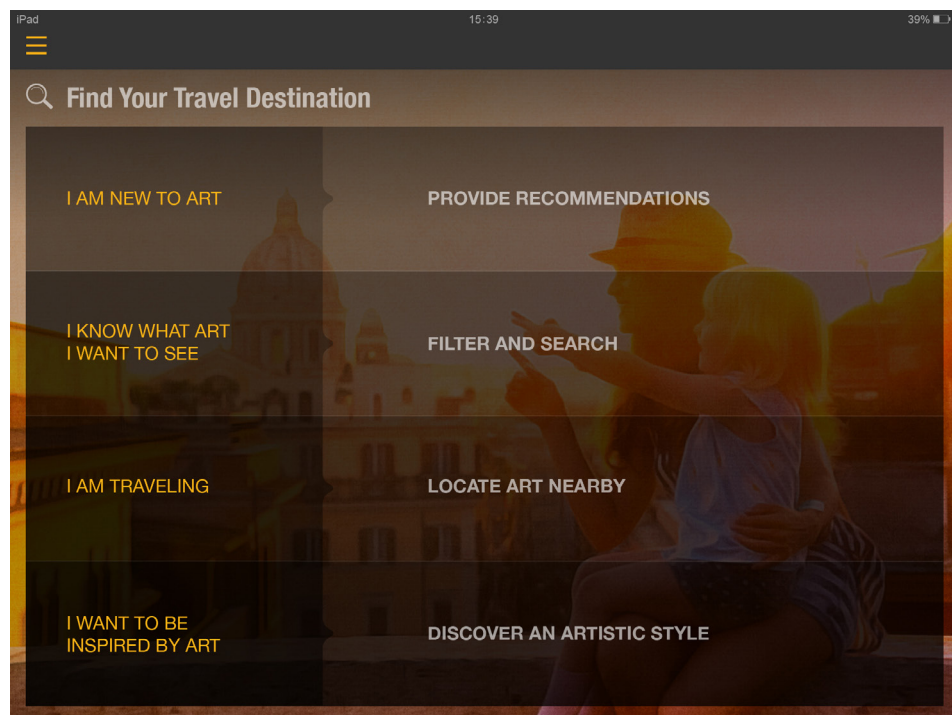


Figure 49. Home Page

App Design

Hidden Sidebar Design in the Home Page

The hamburger button in the left corner is the connection to other parts of this app. This design of hidden sidebar can keep the page simple to the maximum extent. It only appears when users need it, otherwise, it will be hidden (Figure 50).

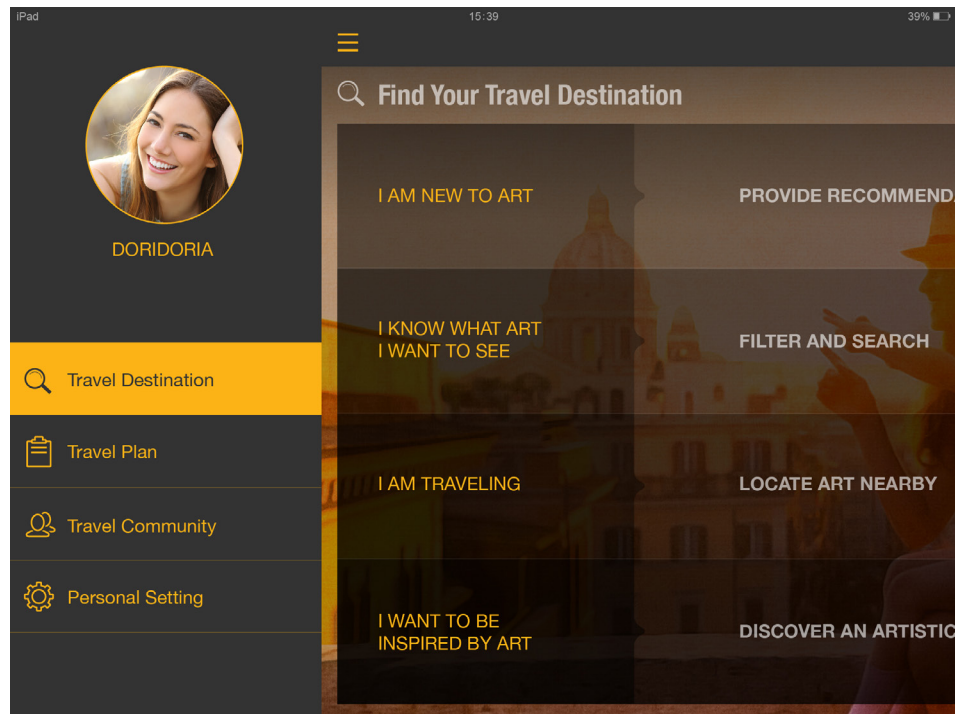


Figure 50. Sidebar in the Home Page

App Design

Art Cities Page

Through the large city photo, a brief introduction, and exhibitions of artworks in the black overlay with transparency, this application provides a general impression of the art city for users, which helps them quickly and efficiently determine their tourist destination. Also, the design of slide page provides more choices for users (Figure 51).

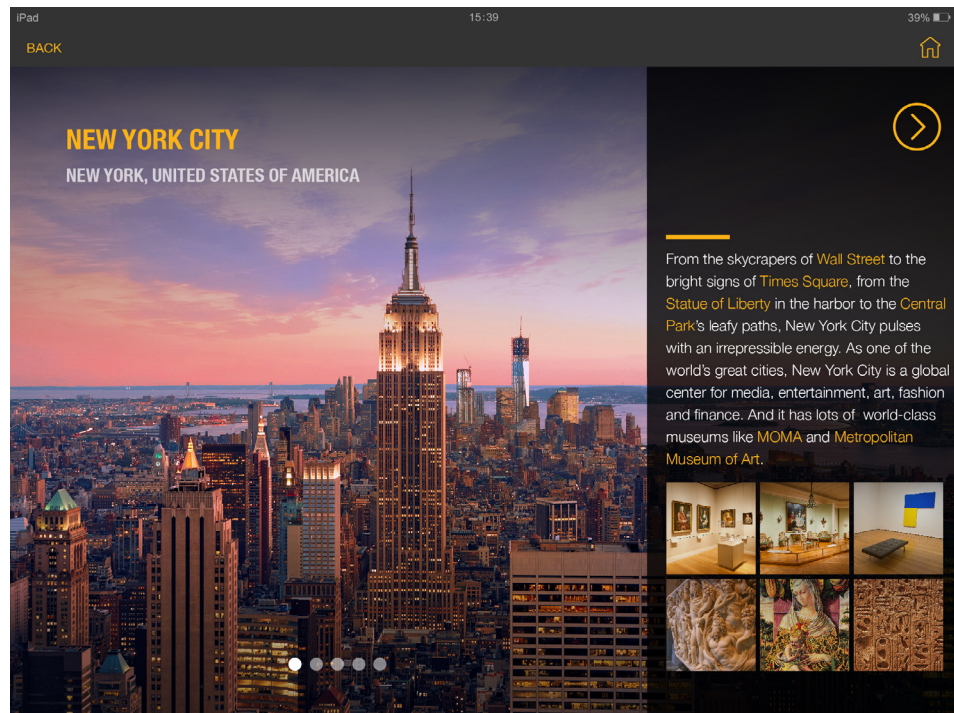


Figure 51. Art Cities Page

App Design

Different Attractions Types Page

Considering the purpose of discovering art, this application provides three types of scenic spots. The three images with oil painting style represent three types, which helps users to quickly understand the difference of different types. What's more, the black and white photo background better highlights the three types, and makes them clear to recognize (Figure 52).

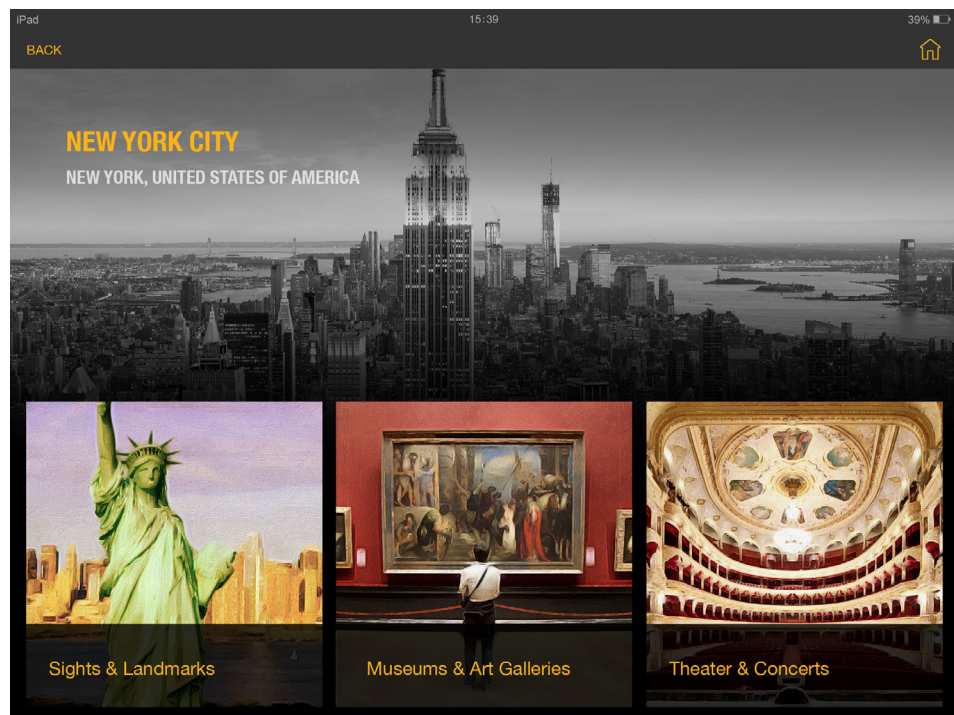


Figure 52. Attractions Types Page

App Design

Image List Design

Attractions List

The image for different attractions used oil painting style instead of a real photo to keep consistency with the overall design style. And also, this oil painting style can be better to reflect the artistic nature of this travel application (Figure 53).

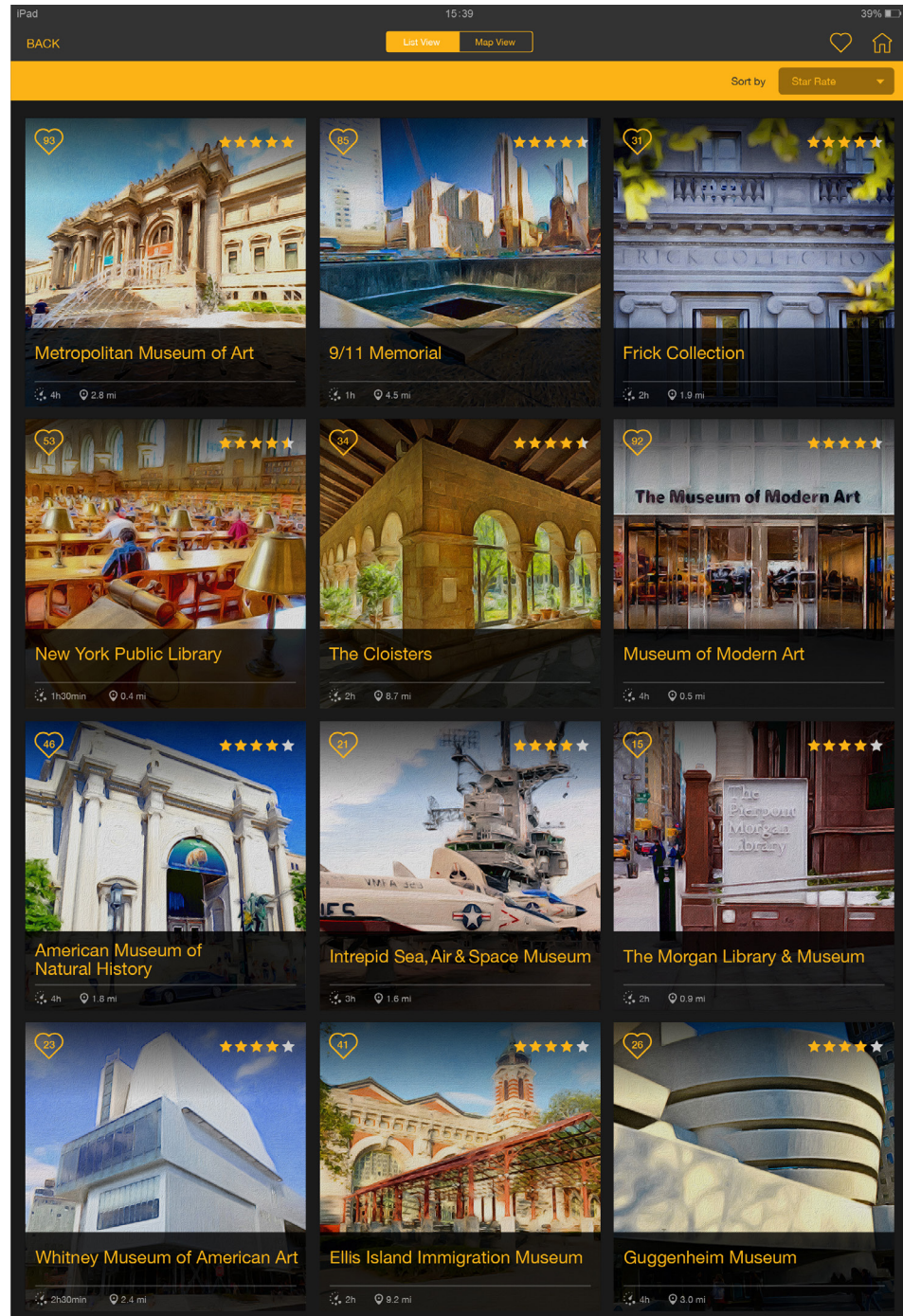


Figure 53. Attractions List Page

App Design

Image List Design

Filter and Search
Art Cities List

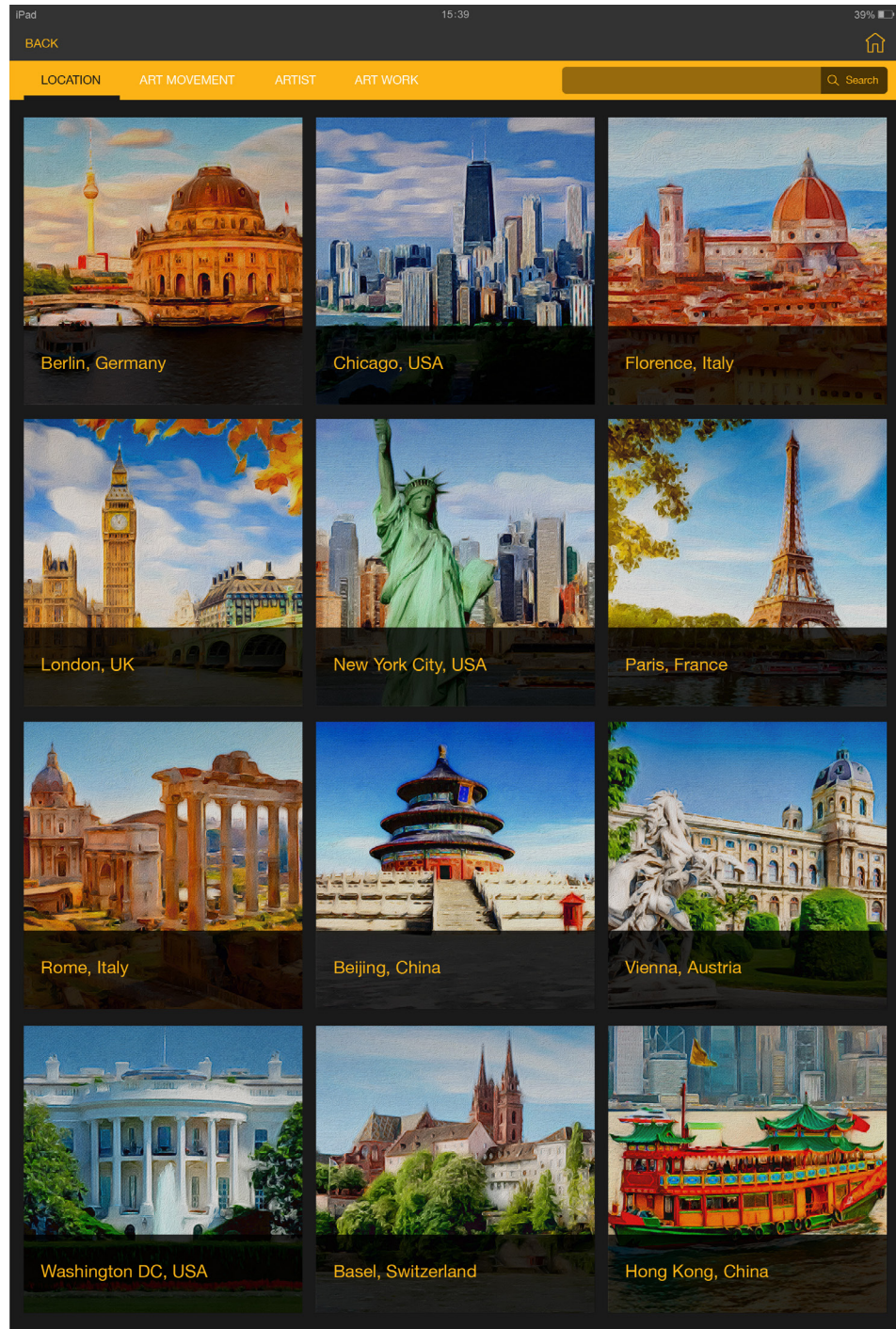


Figure 54. Filter and Search Page

App Design

Image List Design

Discover an Artistic Style
City Styles List

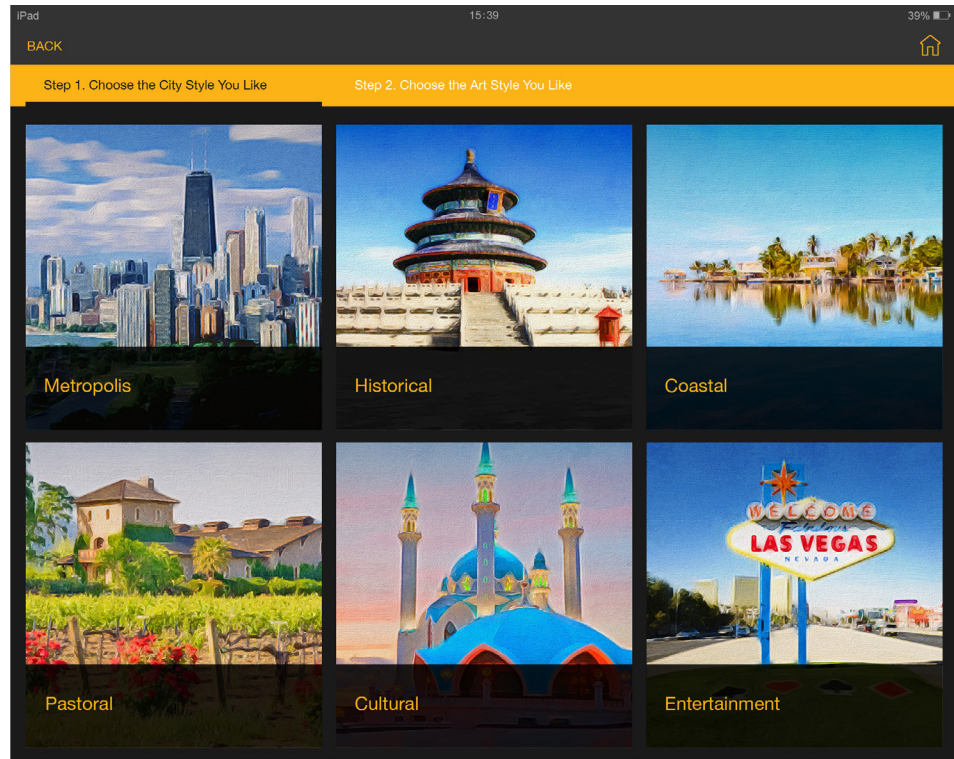


Figure 55. City Styles List Page

App Design

My Favorite Attraction Page

The heart button in the right corner is a convenient way for users to check their saved attractions, and also an expressway to make the travel plan. The attractions list is shaded on this page to make the list of my favorites more obvious (Figure 56).

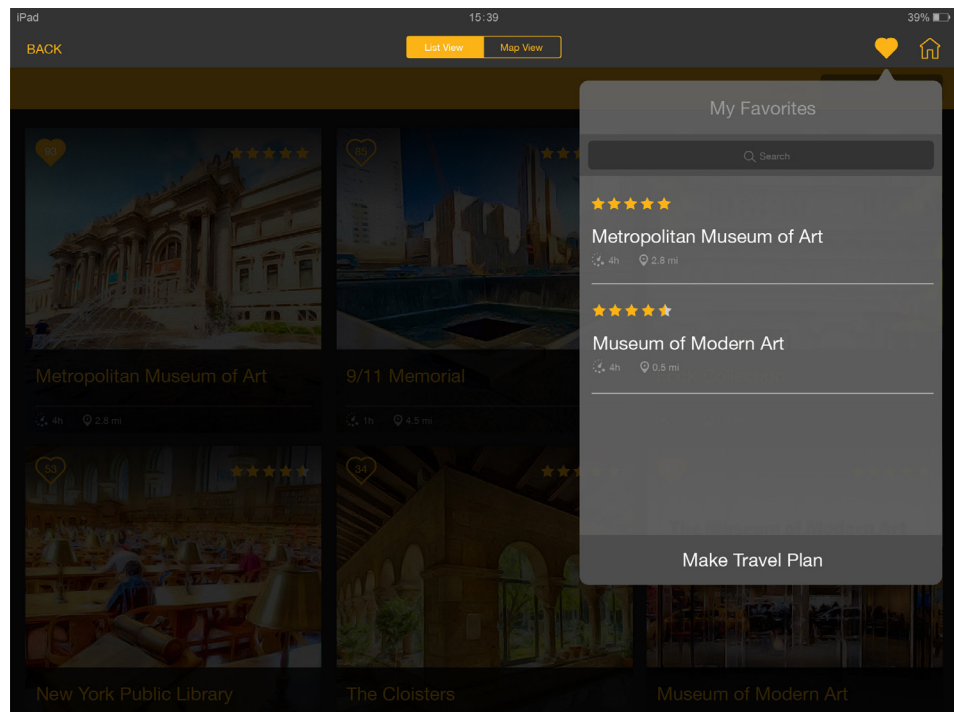


Figure 56. My Favorite Attraction Page

App Design

Map Design

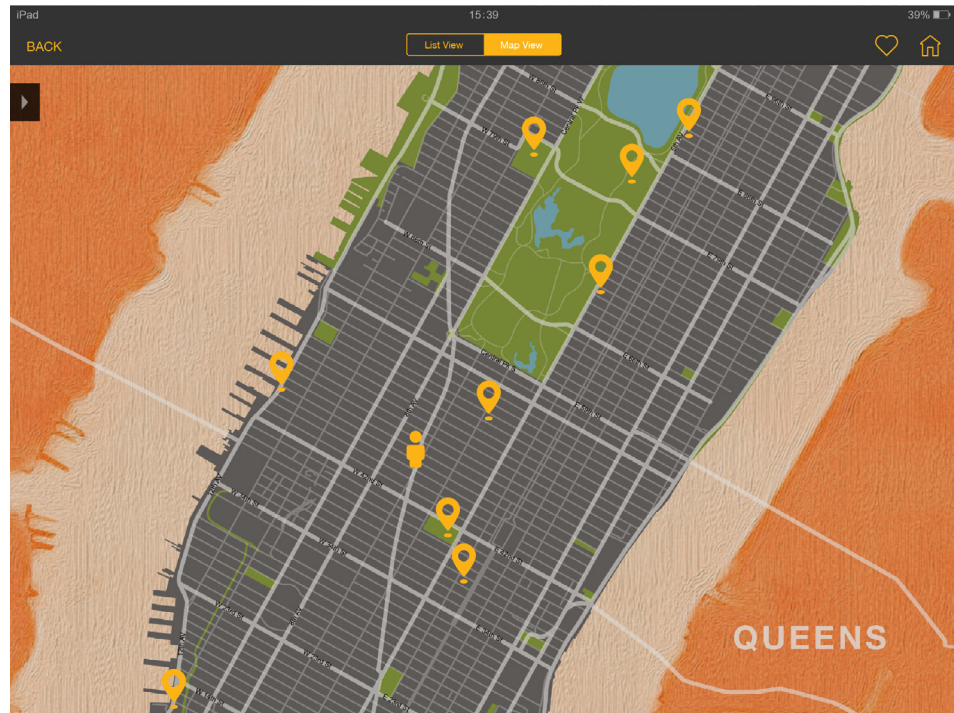


Figure 57. Map Design Page

Map Design with List

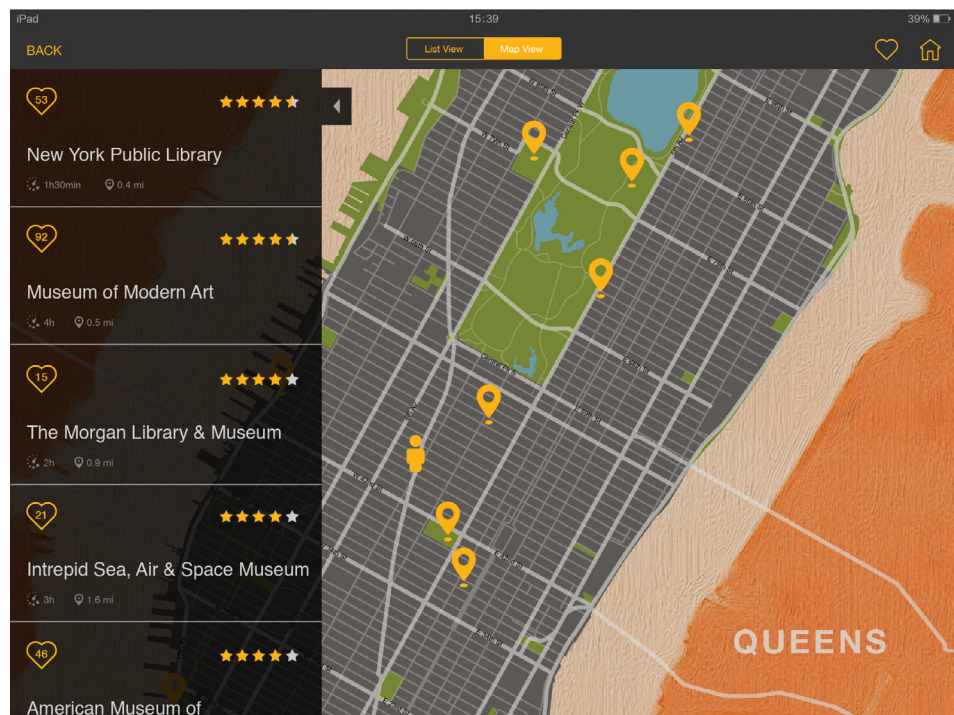


Figure 58. Map with List Page

App Design

Map Design (Search Result)

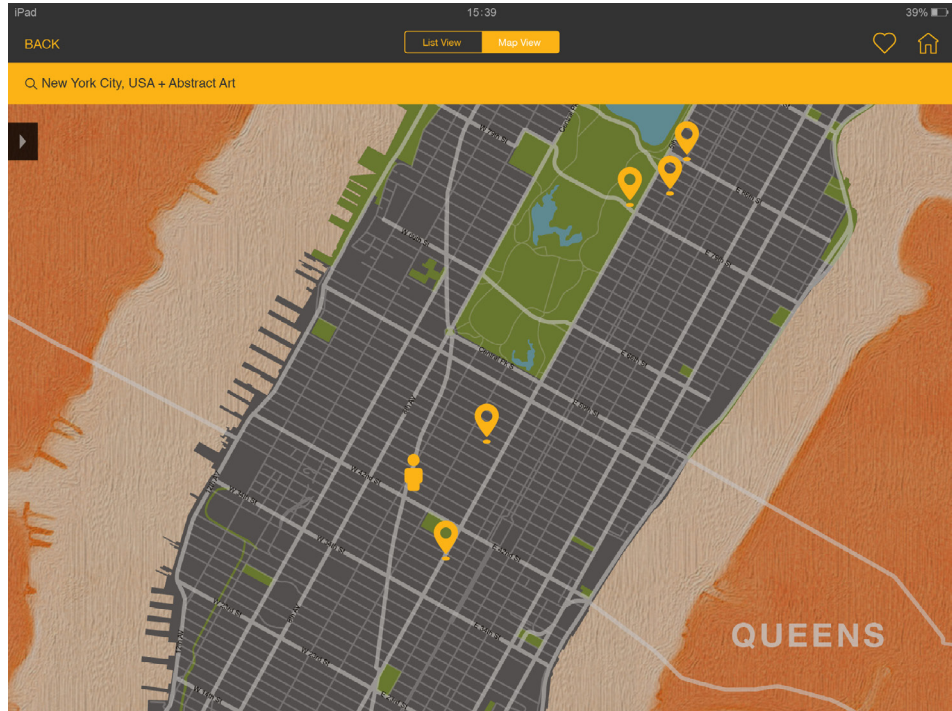


Figure 59. Search Result Map Design Page

Map Design with List (Search Result)

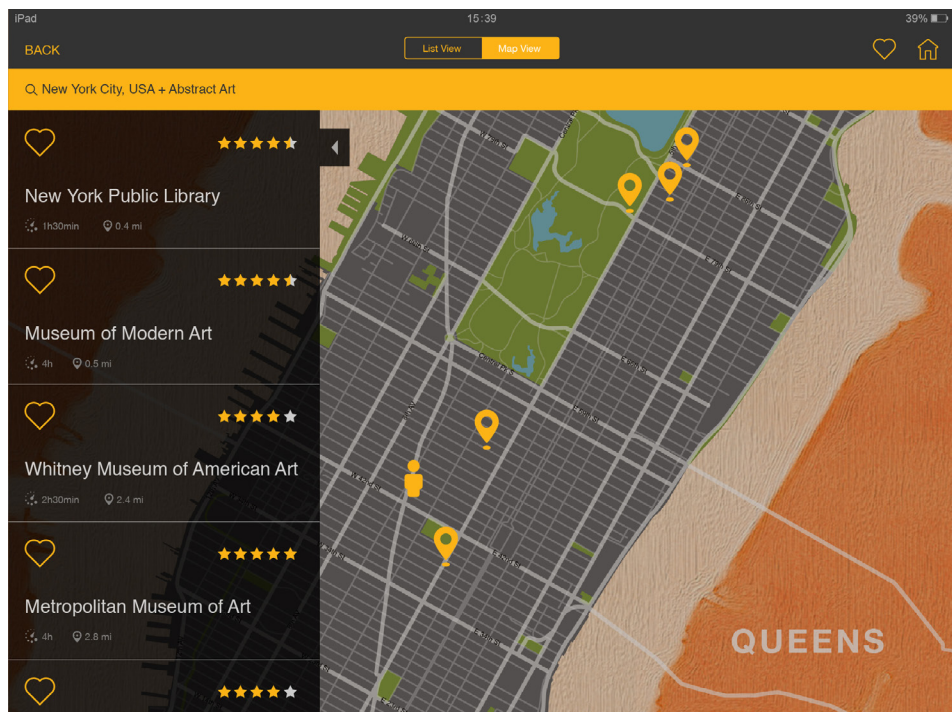


Figure 60. Search Result Map with List Page

App Design

Attraction Page

The lower half of this page shows more artworks in the attraction to provide a better way for users to find their wanted art style (Figure 61).

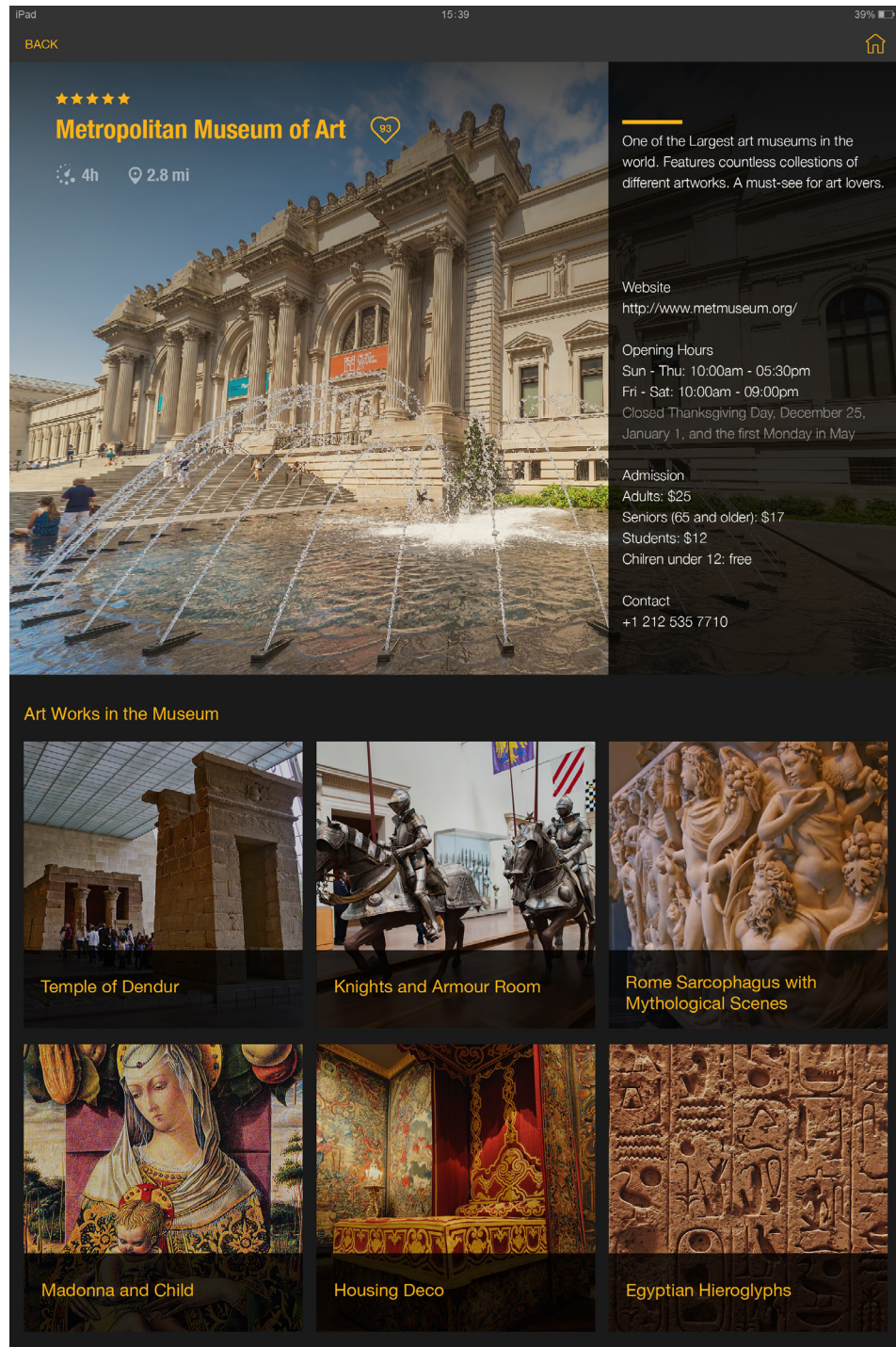


Figure 61. Attraction Information Page

App Design

Personalisation for Travel Plan List Page

The background of this page is the same as welcome page and home page, which keeps consistency of the overall app style. In the travel plan list page, this application provides two choices for users to build their travel plan. The first one is download users' favorite travel plan, which is saved from travel community. Doing this way, users can directly use others' travel plans and save their time to think and create. The second one is building their own new plan, which is unique and personalized (Figure 62).

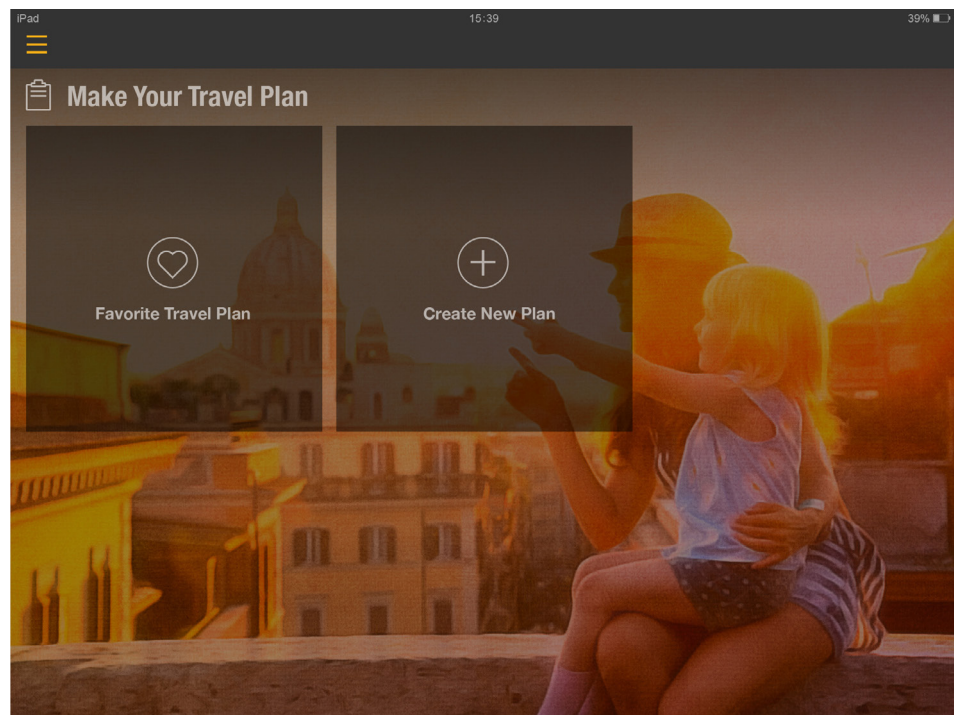


Figure 62. Travel Plan List Page

App Design

Travel Plan List Page My Favorite

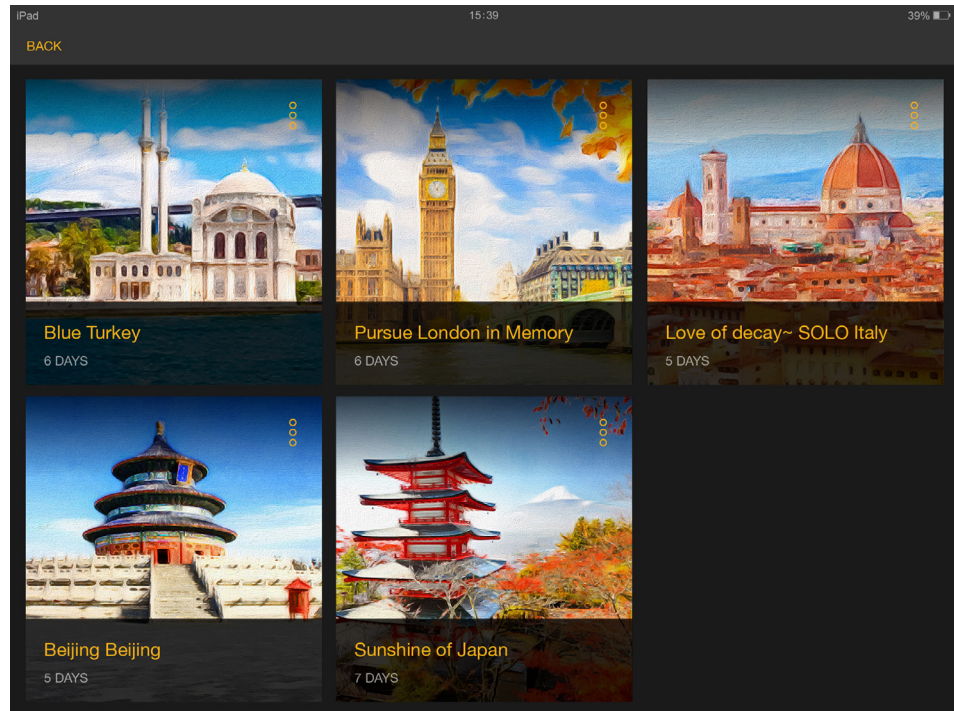


Figure 63. My Favorite Travel Plan Page

More Options (Download, Delete)

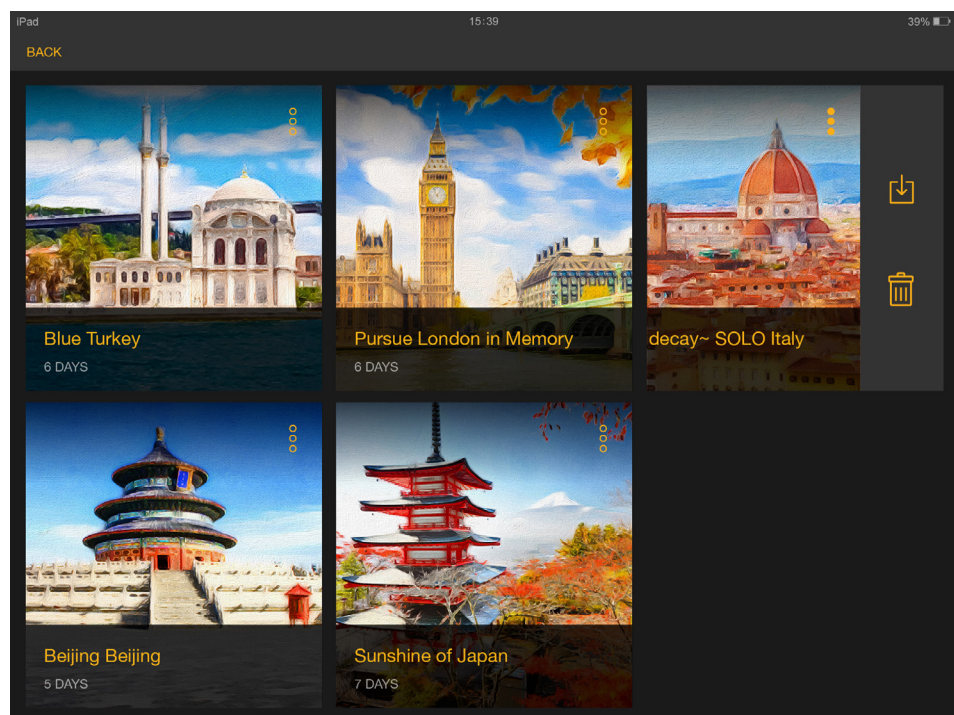


Figure 64. My Favorite Travel Plan Setting Page

App Design

Travel Plan List Page Create New Plan

This is the form for users to create their own travel plan for the new trip. while filling in this form, users do not need to decide their travel time if they are still hesitant, they can add days later in their travel plan. The same as my favorites list, the travel plan list is shaded on this page in order to highlight the form (Figure 65).

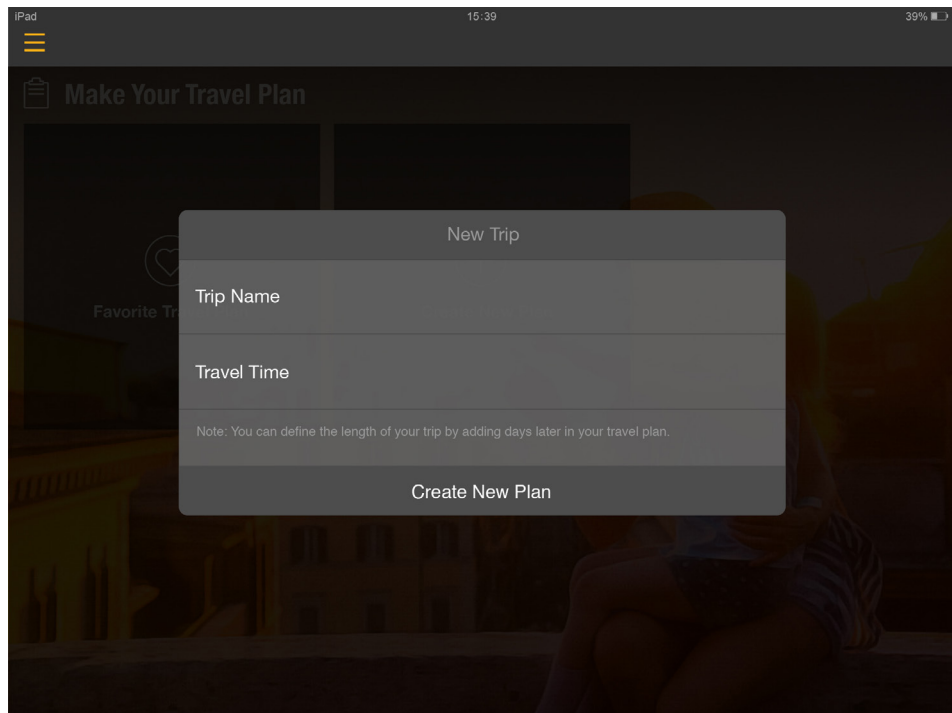


Figure 65. Create New Plan Page

App Design

Travel Plan List Page

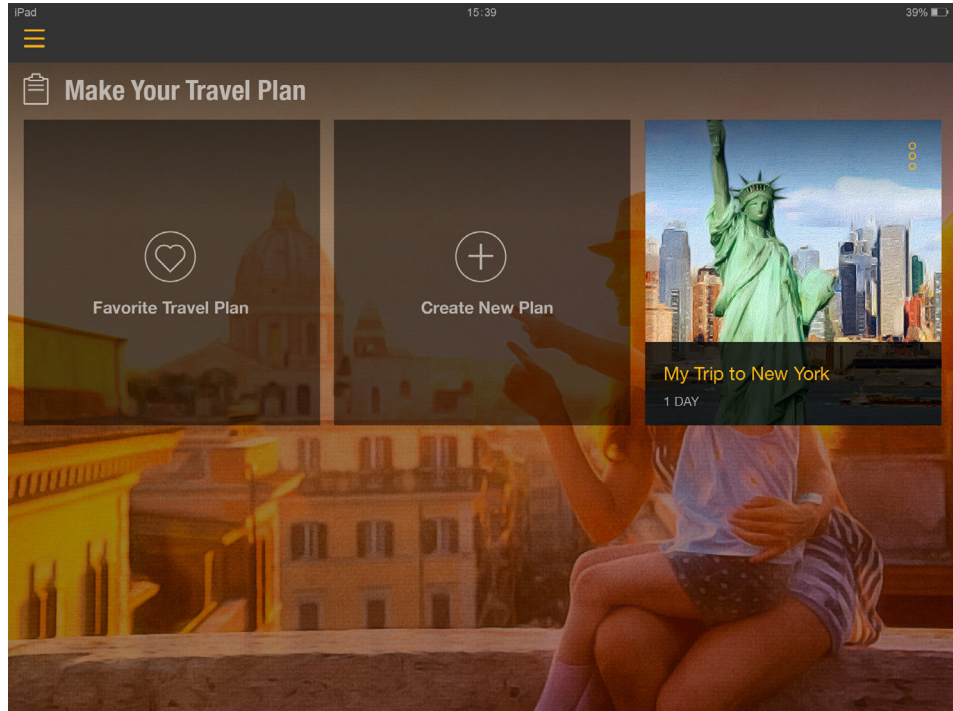


Figure 66. New Travel Plan Page

More Options
(Share, Setting, Delete)

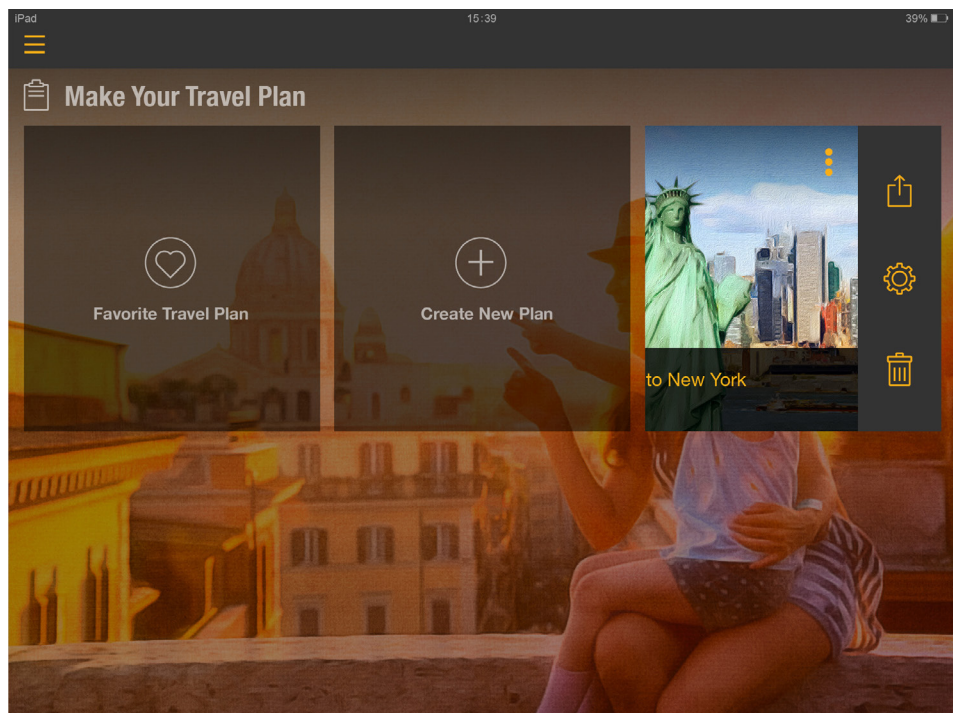


Figure 67. New Travel Plan Setting Page

App Design

Make Travel Plan Page

Using the form of column to distinguish different days and regions of different functions makes this page clearer and more efficient for users to operate and check their travel route. Also, the different transparency added to the column makes a clearer distinction for different regions. In this page, the region of My Favorites always stays in the left. Users can slide the screen to view their itinerary for different days. To add attractions to different days, users only need to move the items in My Favorites to the different column of days (Figure 68).

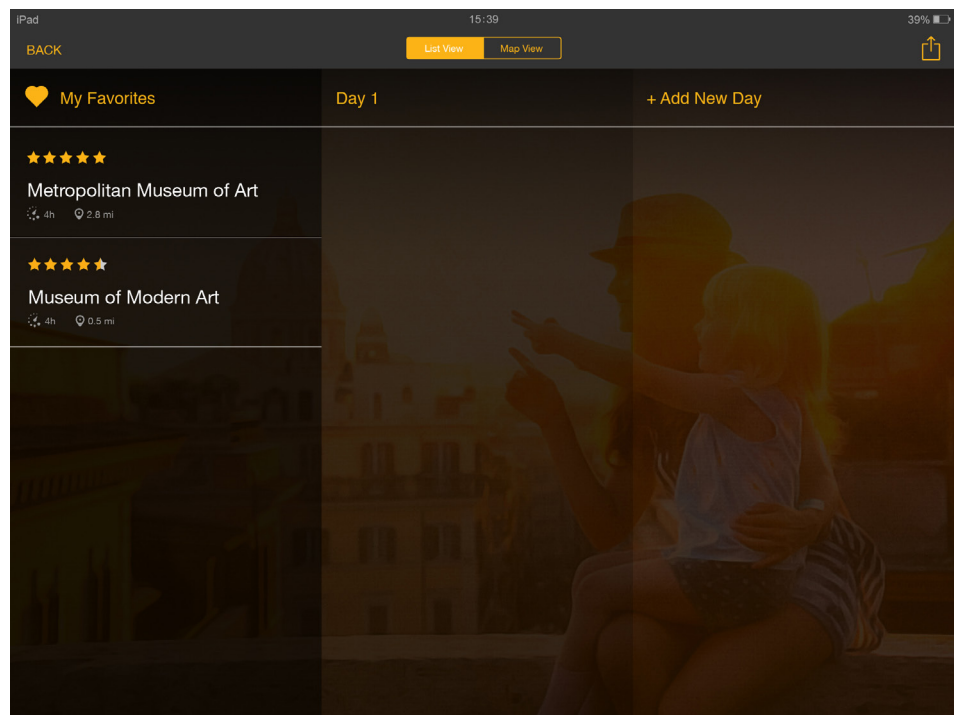


Figure 68. Make Travel Plan Page

App Design

Make Travel Plan Page List View

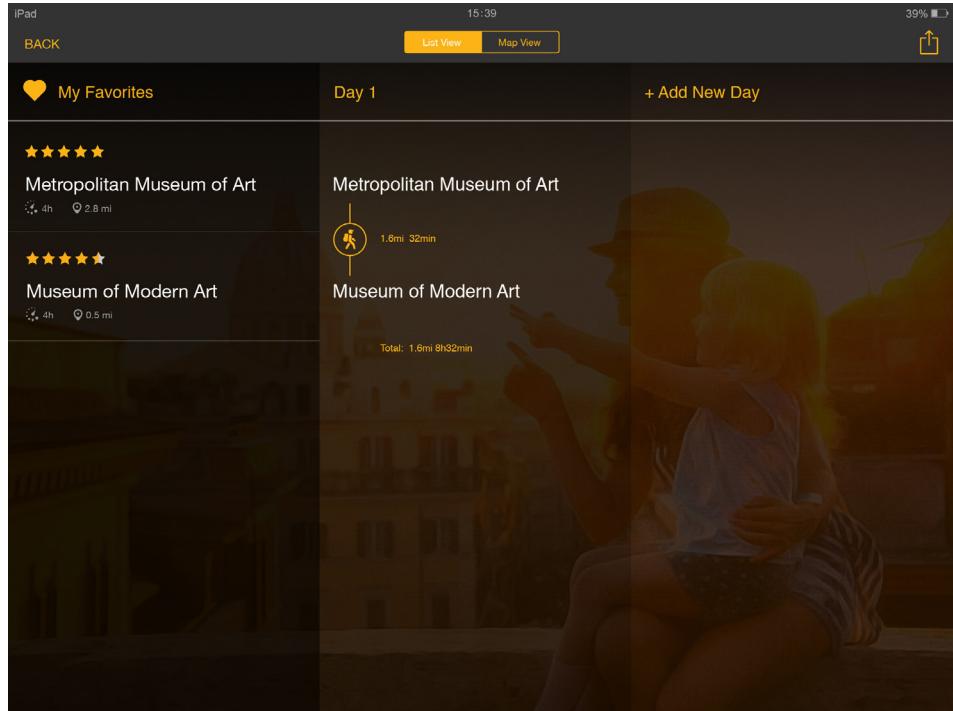


Figure 69. Add Attractions to Travel Plan Page

Change Transportation (Walking, Car, Metro)

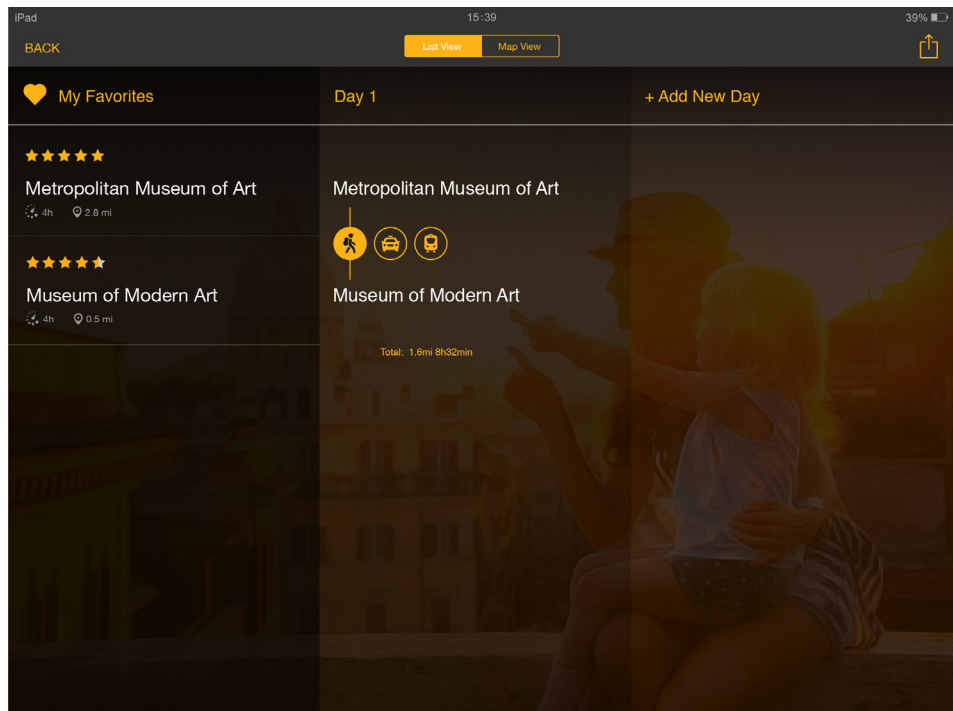


Figure 70. Change Transportation Page

App Design

Travel Community Page Travel Plan List

The design of this page keeps the same as previous image list page. The difference is the search bar at the top of this page. Users can narrow the range of travel plan by filtering travel destination or time (Figure 71).



Figure 71. Travel Community Page

App Design

Shared Travel Plan

Image View

In the image view of shared travel plan, users can have a general impression of the city through seeing more images of attractions and cities instead of a plan list. They also can save favorite attractions in this page for their own travel plan creation (Figure 72).

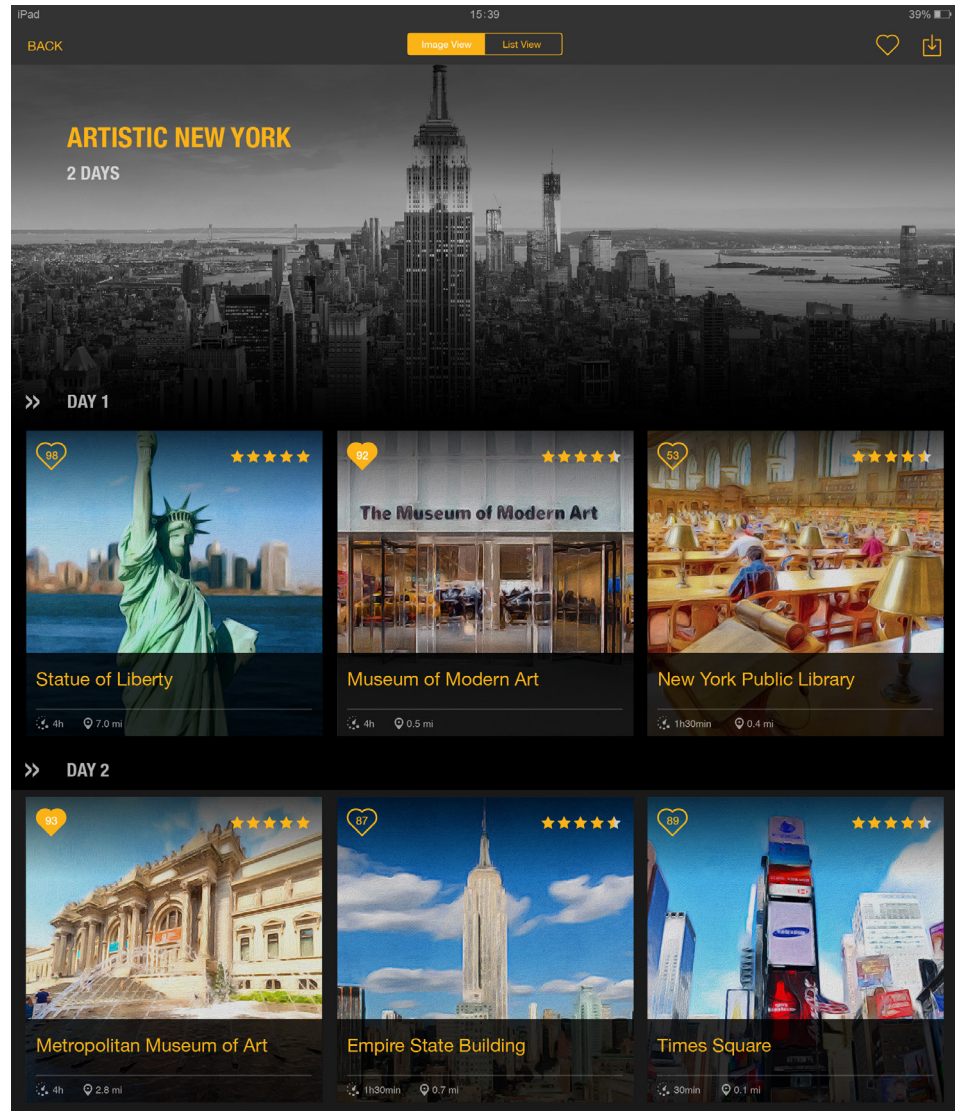


Figure 72. Shared Travel Plan Image Page

App Design

Shared Travel Plan

Image View

For the list view of shared travel plan, the overall style keeps the same as page of making travel plan. It provides a clear and brief travel route for users. From this page, users can quickly and directly know the total travel time of others' trips and their transportation choices, which can be a good reference for them to make their own travel plan (Figure 73).

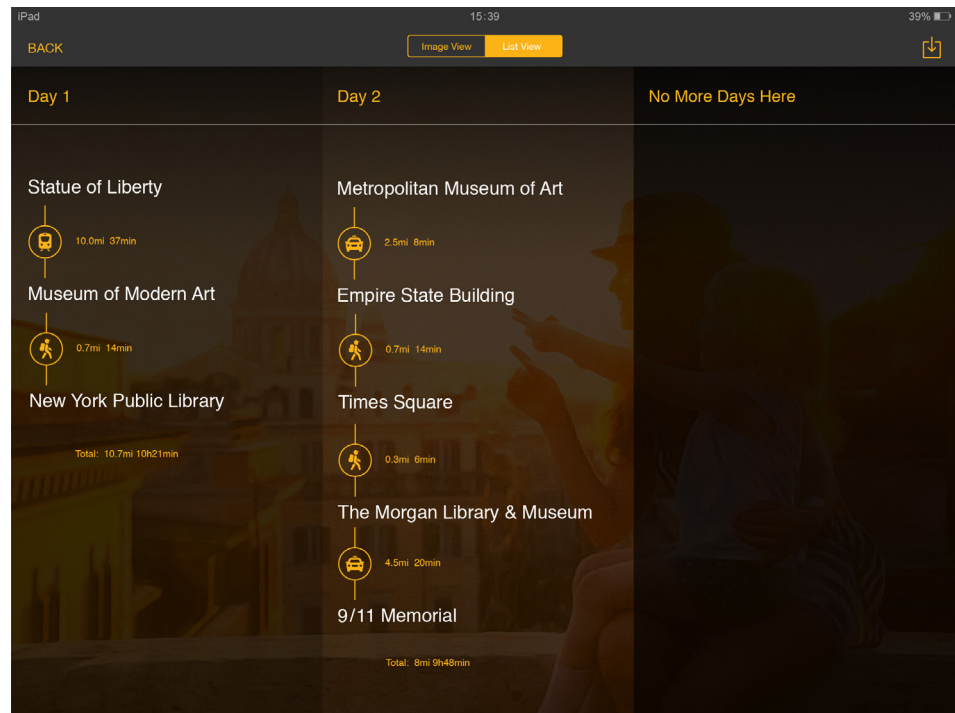


Figure 73. Shared Travel Plan List Page

App Design

Personal Setting

In the part of personal setting, users can edit their username, mobile phone number, and email address, so that they can log in their account through other devices. Also, they can change their login password in this page (Figure 74).

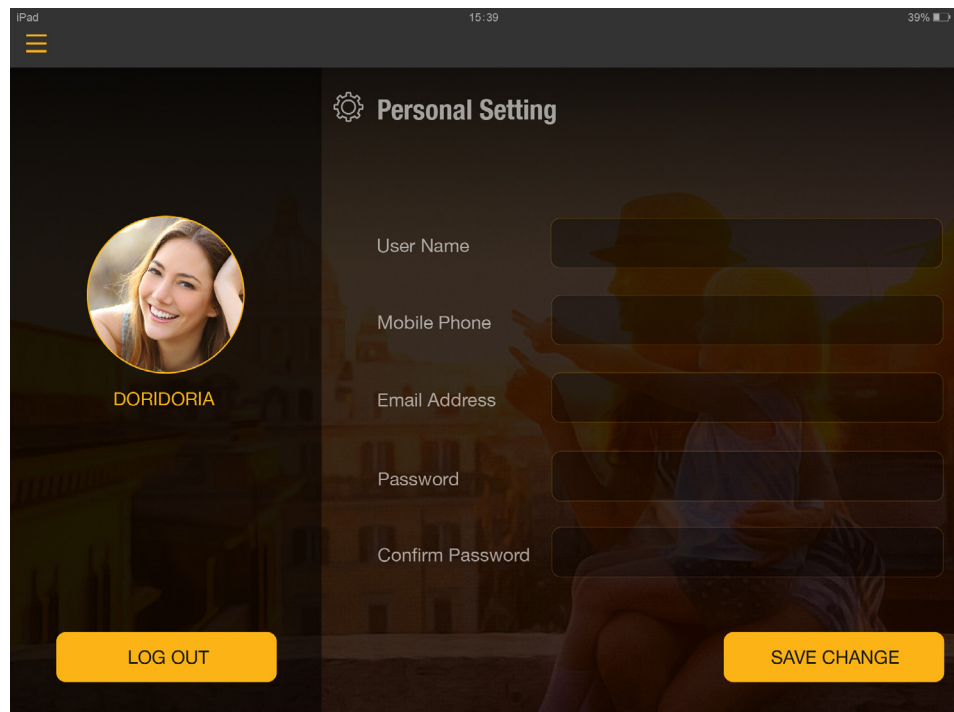


Figure 74. Personal Setting Page

Interactive Prototyping Planning

The interactive prototype is displayed on an iPad and used for user experience testing. For demonstration purposes, users have a pre-determined path to navigate through by following the screen instructions (Figures 75).

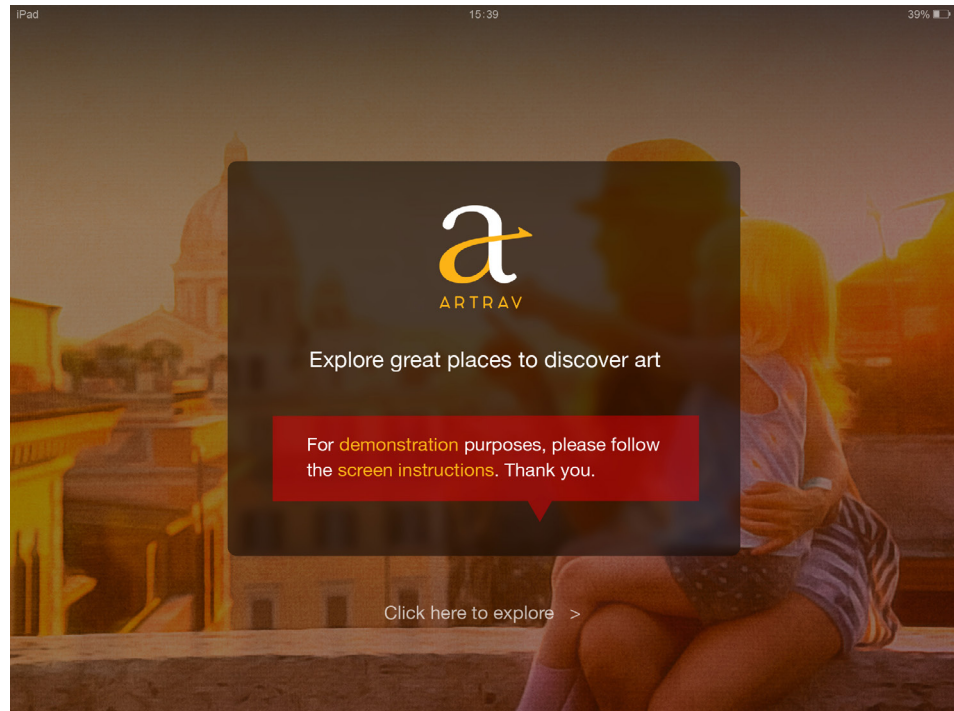


Figure 75. Instruction Page

Interactive Prototyping Planning

Considering the four different ways for users to find their travel destinations, the interactive prototype provided four ways for users to navigate through. Users could choose any ways to find their travel destinations and test the usability of this app. Besides the part of deciding travel destinations, the whole process was the same. To make users better interact with the app and understand its features, a four-step walkthrough was designed as following.

- 1 Log in with a user account and choose a way to decide travel destinations (Figure 76).

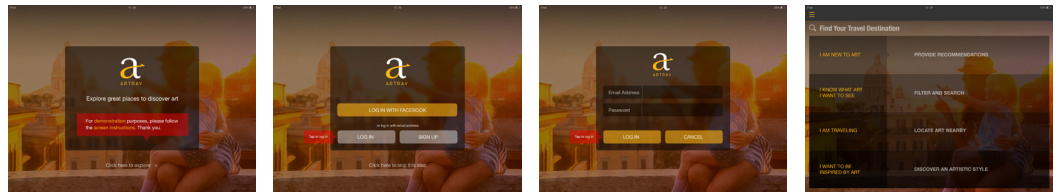


Figure 76. App Walkthrough Step 1

- 2 Choose attractions for further learning and save it to make a travel plan (Figure 77).

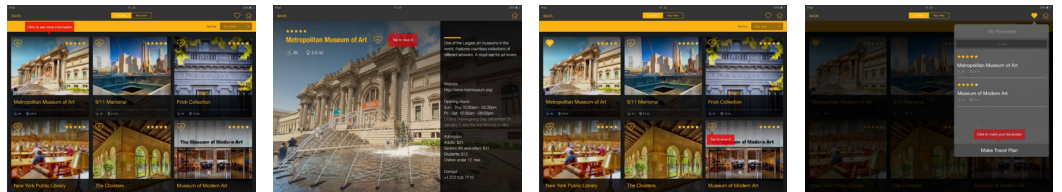


Figure 77. App Walkthrough Step 2

- 3 Design travel route and change the transportations (Figure 78).

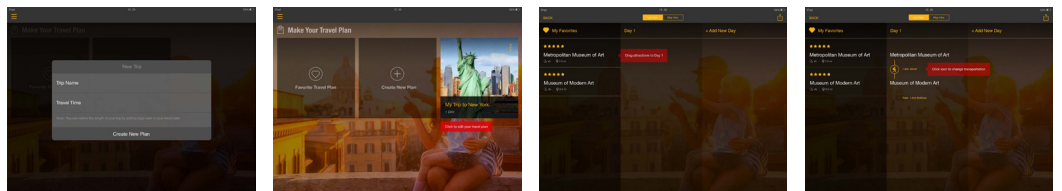


Figure 78. App Walkthrough Step 3

- 4 Share travel plan to travel community and edit profiles in personal setting (Figure 79).

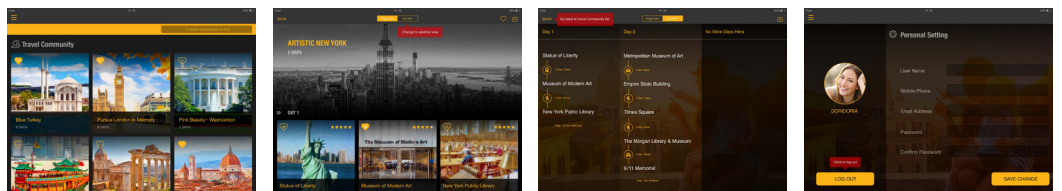


Figure 79. App Walkthrough Step 4

Interactive Prototyping Planning

In the part of deciding travel destinations, users were provided four ways to select to navigate through. The first way was designed to provide recommendations of famous art cities for users who were new to art (Figure 80). In this way, users could swipe the screen to see different art cities and choose one to explore. Also, They could save their favorite attractions through exploring different types of attractions.

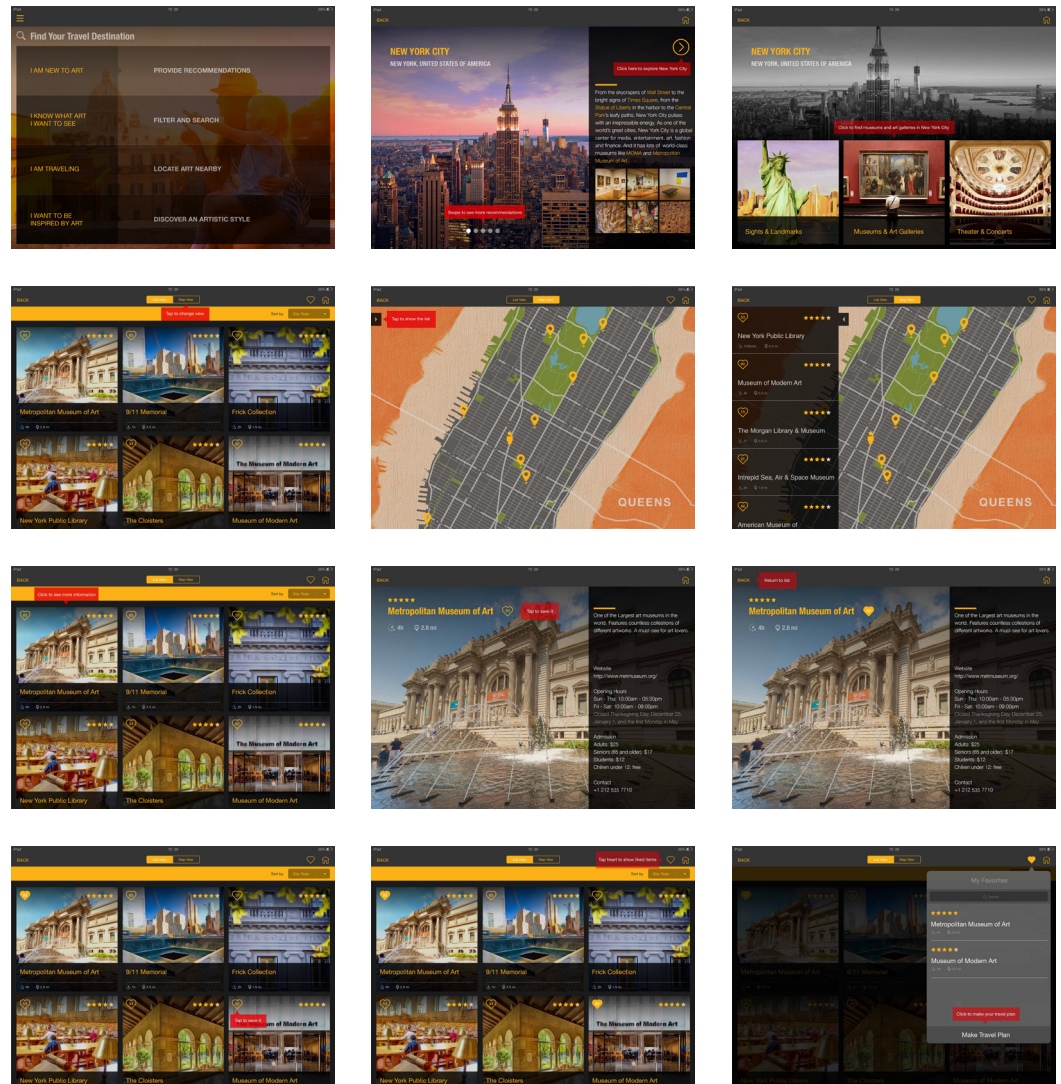


Figure 80. Decide Travel Destinations Option 1

Interactive Prototyping Planning

The second way was for users who knew their travel destinations or artworks they want to see. This testing way provided four filter conditions for users to directly search their travel destinations. Those were location, art movement, artist, and artworks (Figure 81). Through selecting items under filter conditions, users could get their attractions result to see more information and save attractions for making a travel plan in the next step.

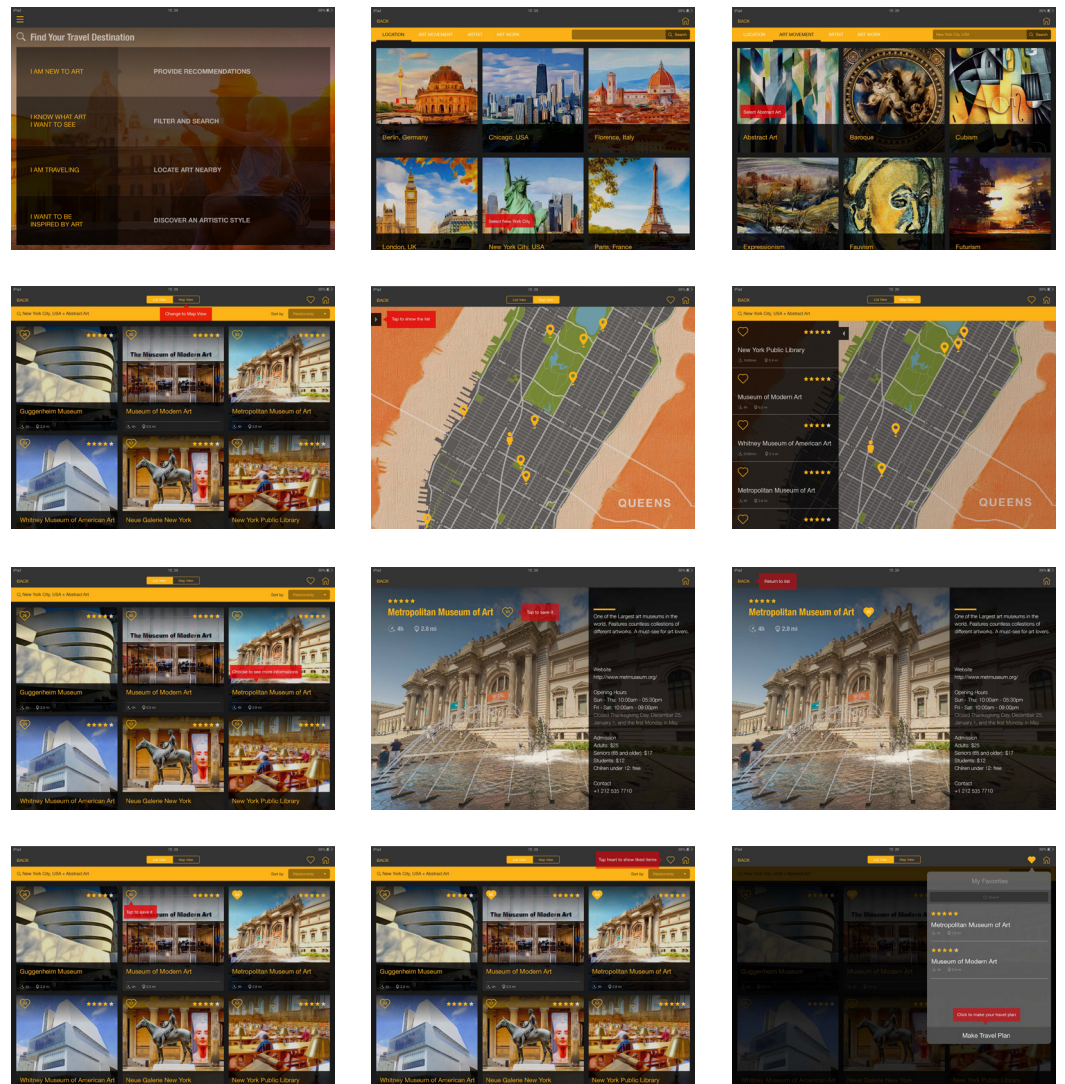


Figure 81. Decide Travel Destinations Option 2

Interactive Prototyping Planning

The third way was locating art nearby while traveling (Figure 82). Users could check their current location and the attractions in their neighborhood.

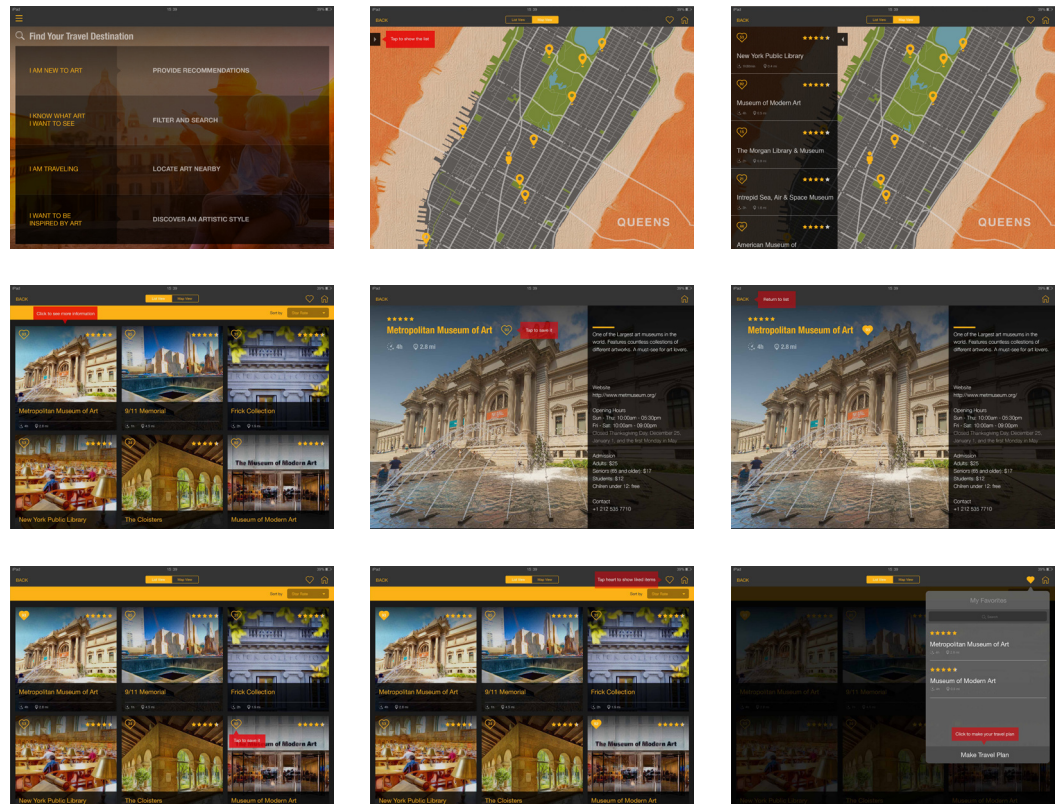


Figure 82. Decide Travel Destinations Option 3

Interactive Prototyping Planning

The final testing method was designed to help users find their artistic style and provide attractions that related with their style (Figure 83). To get the result, the application provided two steps for users to select their interested images. The first step was choosing favorite city style, and the second step was choosing favorite art style. After these two steps, users could get the cities results that fitted with their style.

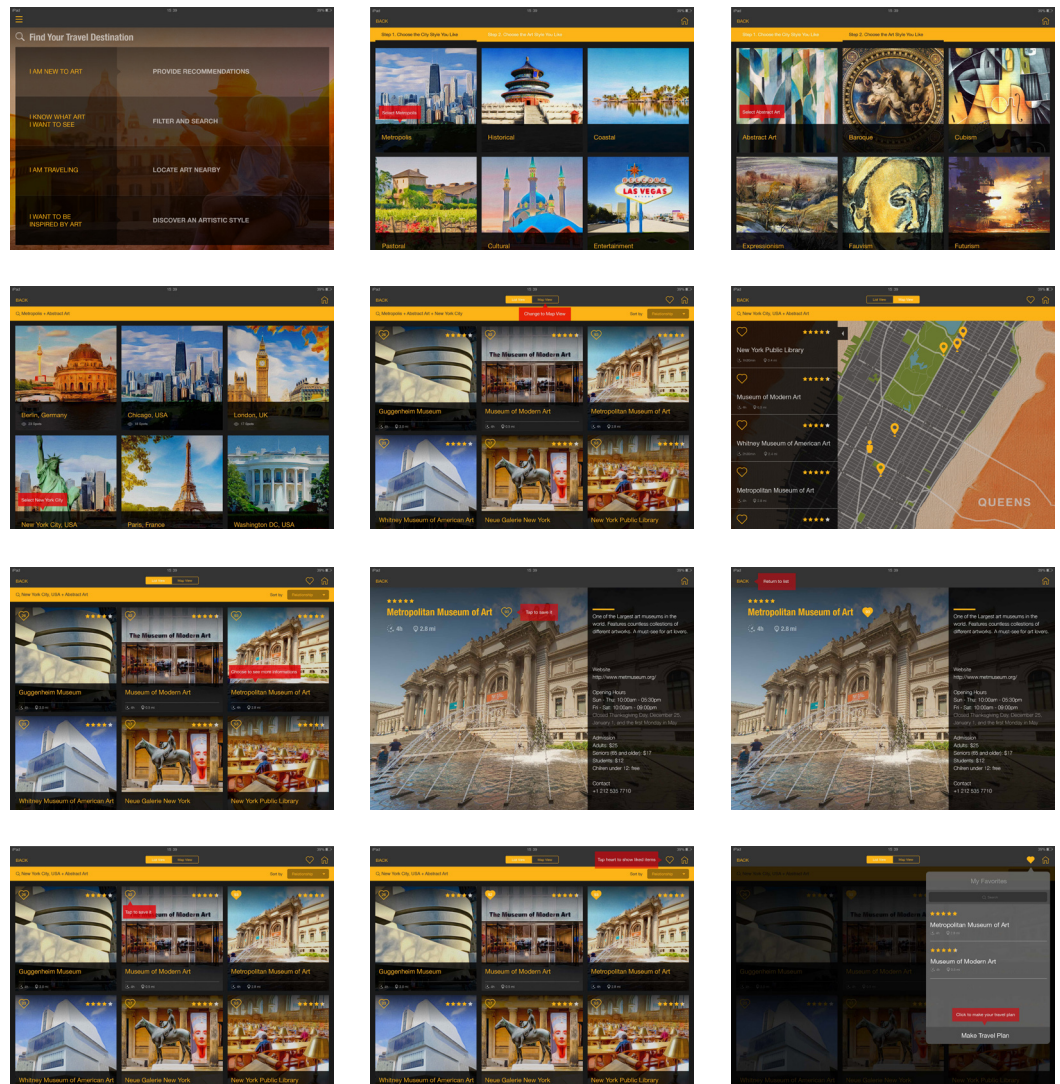


Figure 83. Decide Travel Destinations Option 4

Interactive Prototyping Implementation

The interactive prototype was created in Proto.io which could be displayed not only in the computer but also on iPad. The final prototype contained various states for buttons, transition effects and other interactive elements (Figures 84 – 85).



Figure 84. Creating Interactive Prototype in Proto.io

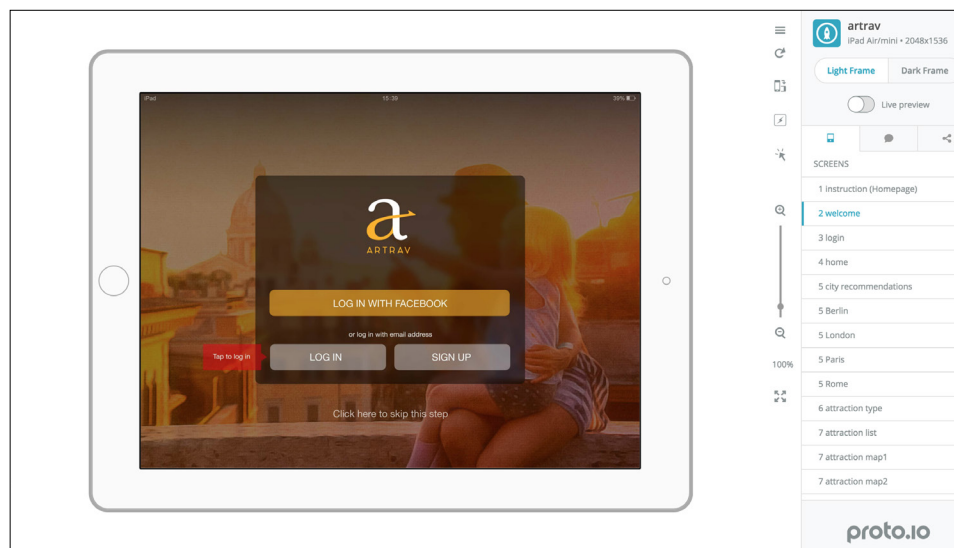


Figure 85. Interactive Prototype Displayed in Screen

Interactive Prototyping Implementation

After a variety of trial and error, an interactive proof-of-concept was built with the online prototyping tool Proto.io, and displayed on an iPad for usability testing. This prototype was used to demonstrate the functionality of the user interface and the effectiveness of the user experience. For usability testing, it allowed users to have an interactive experience to test the overall layout, the navigation system, the language used in the application, and the instructions for operation (Figure 86).



Figure 86. Interactive Prototype Displayed on an iPad

User Testing and Feedback

After creating the interactive prototype, feedback was collected from a variety of audiences, including thesis advisors, RIT students, and designers from various ethnic backgrounds. This application was tested in two ways.

Testing 1

The first testing method was face-to-face observation and interview. And several questions were listed including the overall style, the language used in the app, and the navigation instructions (Figure 87).

- 1 Are the prototype instructions clear and obvious? Is this application easy to use?
- 2 Is the language used in the app easily understand?
- 3 Does the overall style well represent the art tourism?
- 4 Does the app work the way you want it to work? Do you think the process of this app to make travel plan is credible? Do you have any suggestions on the process?
- 5 Is an enjoyable experience while using this application?
- 6 Does anything about the app confuse you? (Content, Layout, Design, etc.)

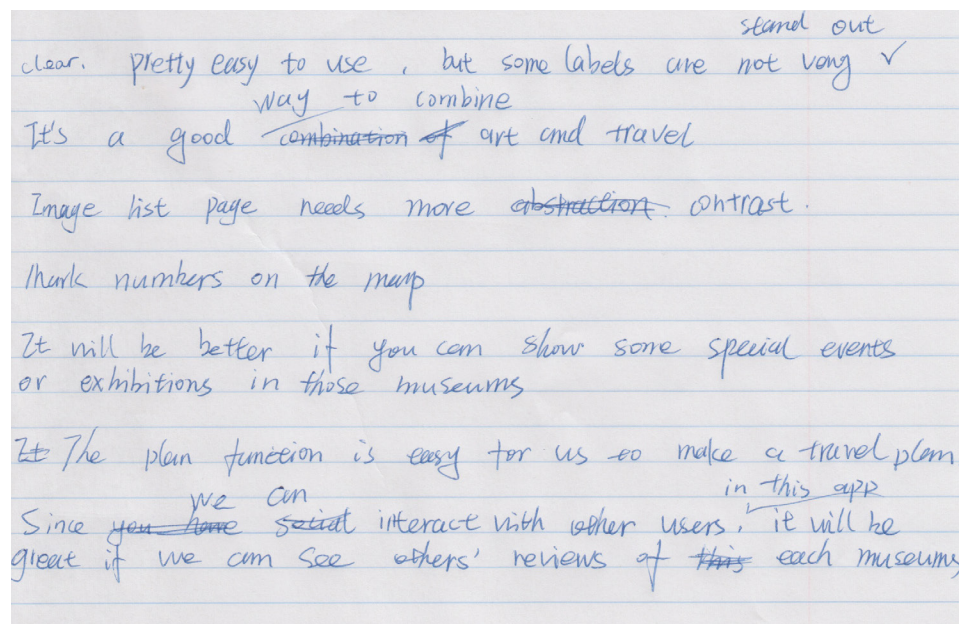
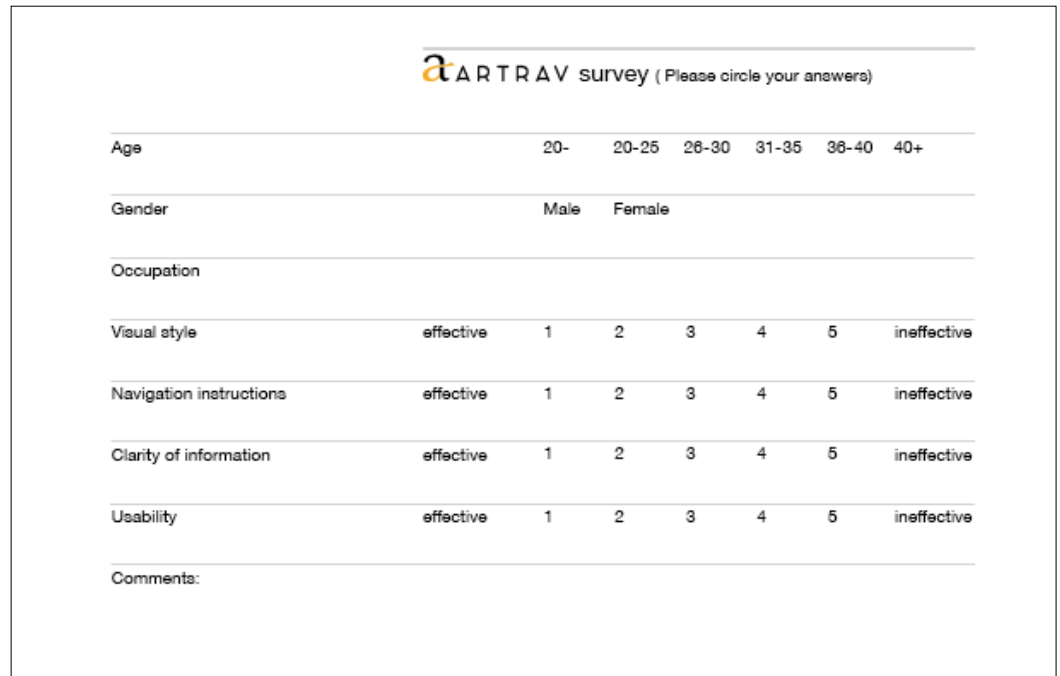


Figure 87. User Feedback

User Testing and Feedback

Testing 2

The second user testing way gathered feedback from RIT students, professors and other visitors of thesis show. To better collect feedbacks, a survey form was designed for audiences to rate the application and make any comments (Figure 88).



ARTRAV survey (Please circle your answers)

Age	20-	20-25	26-30	31-35	36-40	40+	
Gender	Male	Female					
Occupation							
Visual style	effective	1	2	3	4	5	ineffective
Navigation instructions	effective	1	2	3	4	5	ineffective
Clarity of information	effective	1	2	3	4	5	ineffective
Usability	effective	1	2	3	4	5	ineffective
Comments:							

Figure 88. Thesis Show Survey

Feedback

After analyzing the feedback from interview and survey, most users indicated they liked the overall style and the visual elements in the app. They were also interested in the new way to discover art from traveling, especially the option of discovering an artistic style. Some of them also informed the process from saving their favorite attractions to making a tour plan was effective and efficient.

Also, some users gave very useful suggestions for future development of this app, for example developing more social functions in the travel community, having an effect in the city recommendation page to swipe from the last city to the first one, and adding a search bar in the option of providing recommendations.

Based on the feedback collected from the two testing ways, the Artrav app will be continually modified as the needs of the users for creating a better user experience.

Evaluation and Conclusions

Evaluation on User Testing

Through face-to-face interview and survey in the thesis show, results from the two testing ways indicated the participants responded positively to the aesthetics of the application. Almost all the participants considered the visual style was appropriate to this travel app and can be effective to show the artistic feature. What's more, a majority of participants were interested in the oil painting style displayed in this project. They gave a high evaluation on the bright and unique way to show travel images.

By actual operation on an iPad, most audiences indicated the screen navigation instructions was clear and the language used in the instructions was easy to understand. Through testing, the navigation instructions on the screen were proved to be effective to guide users navigate through a pre-determined path.

For the testing on the clarity of information, although a majority of participants gave a high rating, some participants still pointed out some problems, including the brief introduction of famous art cities and the basic information of attractions. Based on the feedback, the Artrav app will be modified to provide a clearer and more structured information for users. Also, for the future development, this project will show more art information for people, interested in art, to have a better artistic tour.

Since the goal of this thesis was to create an effective and efficient user experience system, the usability testing played an important role in the two testing ways. Results from the usability testing indicated most participants considered the app effective and efficient to use. A majority of them said they liked the concept and thought it to be interesting, and they would definitely use this app while planning a new trip.

Overall, the outcome of the two testing ways was informative to help the application develop better in the future. The visual style left a deep impression on users. And the effective and efficient user experience system helped users to have a better using process and reduced their learning time to use the app.

Evaluation and Conclusions

Benefit

The effective user experience system for mobile travel application helps people, who is interested in art, arrange their travel and have a better art tour.

Providing different ways for users to decide their travel destinations provides more travel possibilities for them and discover their favorite art style from traveling.

Showing more art information in the app helps people know more about art.

Unlike the traditional travel applications, this design provides a new direction for people to think and learn something about art while traveling.

Challenge

During the process of design, I overcame a variety of difficulties and met different challenges as following:

- 1 Different kinds of users have different requirements for this application. How to design an effective user experience system for all the target audiences?
- 2 Which way is appropriate to create travel itineraries for people pursuing arts? Will they prefer to choose recommended line? Or will they prefer designing by themselves?
- 3 How to combine art and travel in one mobile app? How to show the art theme in a travel application so users can recognize the feature of this app at first glance?

Future Development

Based on the feedback of user testing, the Artrav app will be developed as following:

- 1 Get contact to different museums and show more art information in the application, including the information of famous artworks in the museum, the current art exhibitions and the upcoming exhibitions.
- 2 Add more social functions in the part of travel community, such as making comments for the travel plan or attractions, getting contact with different members to communicate the travel issues, and looking for companions to travel together.
- 3 Continue to design the interface of other cities in addition to New York City to make it to be a larger project.

Permissions

As a travel application, Artrav relied heavily on photos and graphic images. While designing the interface for the application, the professional imagery of different cities, attractions, artworks, and artists were purchased from Shutterstock.com (Figure 89).

shutterstock	Shutterstock, Inc. Empire State Building 350 Fifth Avenue, 21st Floor New York, NY 10118 USA	INVOICE/RECEIPT Sequence Number: US-0969B2F84-1 Order ID: SSTK-08D3F-874E									
Bill To Yue Liu 249 Crittenden Way, Brighton Rochester, NY 14623 United States Username: doridoria	<table><tr><th>Date</th><th>Credit Card</th><th>Terms</th></tr><tr><td>11/5/2015</td><td>4006</td><td>Paid</td></tr></table>	Date	Credit Card	Terms	11/5/2015	4006	Paid				
Date	Credit Card	Terms									
11/5/2015	4006	Paid									
<table><tr><th>Qty</th><th>Description</th><th>Amount</th></tr><tr><td>1</td><td>30-day Subscription, Standard License with 350 Downloads per Month</td><td>\$143.00</td></tr><tr><td></td><td>TOTAL:</td><td>\$143.00</td></tr></table>	Qty	Description	Amount	1	30-day Subscription, Standard License with 350 Downloads per Month	\$143.00		TOTAL:	\$143.00	Thank you for your business! support@shutterstock.com (646) 419-4452	
Qty	Description	Amount									
1	30-day Subscription, Standard License with 350 Downloads per Month	\$143.00									
	TOTAL:	\$143.00									

Figure 89. Shutterstock Permission

Appendix

Thesis Show Surveys

ARTRAV survey (Please circle your answers)

Age 20- 20-25 26-30 31-35 36-40 40+

Gender Male Female

Occupation VCD Student

Visual style effective 1 2 3 4 5 ineffective

Navigation instructions effective 1 2 3 4 5 ineffective

Clarity of information effective 1 2 3 4 5 ineffective

Usability effective 1 2 3 4 5 ineffective

Comments: I like the graphics, and style, a little confusing with a lot of info but it looks very professional and high level App. .

ARTRAV survey (Please circle your answers)

Age 20- 20-25 26-30 31-35 36-40 40+

Gender Male Female

Occupation

Visual style effective 1 2 3 4 5 ineffective

Navigation instructions effective 1 2 3 4 5 ineffective

Clarity of information effective 1 2 3 4 5 ineffective

Usability effective 1 2 3 4 5 ineffective

Comments: Going to be very helpful!

Appendix

Thesis Show Surveys

ARTRAV survey (Please circle your answers)

Age 20- 20-25 26-30 31-35 36-40 40+

Gender Male Female

Occupation

Visual style effective (1) 2 3 4 5 ineffective

Navigation instructions effective (1) 2 3 4 5 ineffective

Clarity of information effective 1 2 (3) 4 5 ineffective

Usability effective 1 (2) 3 4 5 ineffective

Comments: After favorite travel plan. No navigation info was present. Had to "guess" the back button use.
Got lost for 2 times. Very nice visuals. u

ARTRAV survey (Please circle your answers)

Age 20- 20-25 26-30 31-35 36-40 40+

Gender Male Female

Occupation Grad Student

Visual style effective 1 2 3 (4) 5 ineffective

Navigation instructions effective 1 2 (3) 4 5 ineffective

Clarity of information effective 1 2 (3) 4 5 ineffective

Usability effective 1 2 (3) 4 5 ineffective

Comments: I like the concept of saving places and making a tour plan.
Not quite understood travel community.

Appendix

Thesis Show Surveys

ARTRAV survey (Please circle your answers)

Age	20-	20-25	<u>26-30</u>	31-35	36-40	40+	
Gender	Male	<u>Female</u>					
Occupation							
Visual style	effective	<u>1</u>	2	3	4	5	ineffective
Navigation instructions	effective	<u>1</u>	2	3	4	5	ineffective
Clarity of information	effective	1	<u>2</u>	3	4	5	ineffective
Usability	effective	<u>1</u>	2	3	4	5	ineffective

Comments: *The graphics are cool, the color/icon/layout are all comfortable and efficient. Only one thing is the New to Arts part is a bit confusing. It'd be great if there's search bar too.*

ARTRAV survey (Please circle your answers)

Age	<u>20-</u>	20-25	26-30	31-35	36-40	40+	
Gender	Male	<u>Female</u>					
Occupation							
Visual style	effective	<u>1</u>	2	3	4	5	ineffective
Navigation instructions	effective	<u>1</u>	2	3	4	5	ineffective
Clarity of information	effective	<u>1</u>	2	3	4	5	ineffective
Usability	effective	<u>1</u>	2	3	4	5	ineffective

Comments: *Your App looks so good on layout ~*

Appendix

Thesis Show Surveys

ARTRAV survey (Please circle your answers)

Age	20-	20-25	<u>26-30</u>	31-35	36-40	40+	
Gender	Male	<u>Female</u>					
Occupation							
Visual style	effective	<u>1</u>	2	3	4	5	ineffective
Navigation instructions	effective	<u>1</u>	2	3	4	5	ineffective
Clarity of information	effective	<u>1</u>	2	3	4	5	ineffective
Usability	effective	<u>1</u>	2	3	4	5	ineffective
Comments:	Nice! Love the concept! Maybe add some social function in the "travel Community".						

ARTRAV survey (Please circle your answers)

Age	20-	20-25	<u>26-30</u>	31-35	36-40	40+	
Gender	Male	<u>Female</u>					
Occupation	Student						
Visual style	effective	<u>1</u>	2	3	4	5	ineffective
Navigation instructions	effective	<u>1</u>	2	3	4	5	ineffective
Clarity of information	effective	<u>1</u>	2	3	4	5	ineffective
Usability	effective	<u>1</u>	2	3	4	5	ineffective
Comments:	It's really great application with clean and effective design.						

Appendix

Thesis Show Surveys

ARTRAV survey (Please circle your answers)

Age 20- 20-25 26-30 31-35 36-40 40+

Gender Male Female

Occupation

Visual style effective 1 2 3 4 5 ineffective

Navigation instructions effective 1 2 3 4 5 ineffective

Clarity of information effective 1 2 3 4 5 ineffective

Usability effective 1 2 3 4 5 ineffective

Comments: *Awesome! I like it. The color, the typography, and the order of information. The only stuff which make me a little confuse is the navigation bars, it always attract my concentration.*

ARTRAV survey (Please circle your answers)

Age 20- 20-25 26-30 31-35 36-40 40+

Gender Male Female

Occupation *PROF*

Visual style effective 1 2 3 4 5 ineffective

Navigation instructions effective 1 2 3 4 5 ineffective

Clarity of information effective 1 2 3 4 5 ineffective

Usability effective 1 2 3 4 5 ineffective

Comments: *I like the discon you- favorite art style. Educational rxn. I will use this.*

Appendix

Thesis Show Surveys

ARTRAV survey (Please circle your answers)

Age	20-	<u>20-25</u>	26-30	31-35	36-40	40+	
Gender	Male	<u>Female</u>					
Occupation	<u>Student.</u>						
Visual style	effective	<u>1</u>	2	3	4	5	ineffective
Navigation instructions	effective	<u>1</u>	2	3	4	5	ineffective
Clarity of information	effective	<u>1</u>	2	3	4	5	ineffective
Usability	effective	<u>1</u>	2	3	4	5	ineffective

Comments: For the City page, please add a effect that I can Swap the Roma to New York City! Others are good!

ARTRAV survey (Please circle your answers)

Age	20-	<u>20-25</u>	26-30	31-35	36-40	40+	
Gender	Male	<u>Female</u>					
Occupation							
Visual style	effective	<u>1</u>	2	3	4	5	ineffective
Navigation instructions	effective	<u>1</u>	2	3	4	5	ineffective
Clarity of information	effective	<u>1</u>	2	3	4	5	ineffective
Usability	effective	<u>1</u>	2	3	4	5	ineffective

Comments: Useful APP! ♥

Appendix

Thesis Show Surveys

aARTRAV survey (Please circle your answers)

Age	20-	<u>25-25</u>	26-30	31-35	36-40	40+	
Gender	<u>Male</u>	Female					
Occupation	<u>STUDENT</u>						
Visual style	effective	<u>1</u>	2	3	4	5	ineffective
Navigation instructions	effective	<u>1</u>	2	3	4	5	ineffective
Clarity of information	effective	<u>1</u>	<u>2</u>	3	4	5	ineffective
Usability	effective	<u>1</u>	2	3	4	5	ineffective
Comments:	<u>I felt CAPS was a little overused for the type elements</u>						

aARTRAV survey (Please circle your answers)

Age	20-	20-25	<u>26-30</u>	31-35	36-40	40+	
Gender	<u>Male</u>	Female					
Occupation							
Visual style	effective	<u>1</u>	2	3	4	5	ineffective
Navigation instructions	effective	1	<u>2</u>	3	4	5	ineffective
Clarity of information	effective	1	<u>2</u>	3	4	5	ineffective
Usability	effective	<u>1</u>	2	3	4	5	ineffective
Comments:							

Appendix

Thesis Proposal

The Art Traveler

Building a user experience system to discover art

Yue Liu

Thesis Proposal for the Master of Fine Arts Degree

Rochester Institute of Technology
College of Imaging Arts and Science
School of Design
Visual Communication Design

October, 2014

Thesis Committee Approval

Chief Thesis Adviser

Chris Jackson, Professor, Graduate Director
School of Design, Visual Communication Design

Signature of Chief Thesis Adviser

Date

Associate Thesis Adviser

Daniel DeLuna, Associate Professor
School of Design, Visual Communication Design

Signature of Associate Thesis Adviser

Date

Associate Thesis Adviser

Shaun Foster, Assistant Professor
School of Design, Visual Communication Design

Signature of Associate Thesis Adviser

Date

MFA Thesis Candidate

Yue Liu

Signature of MFA Thesis Candidate

Date

Abstract

With the increasing popularity of mobile devices and their apps, mobile technologies have changed the nature of travel significantly. With numerous travel apps available today, many tourists can become confused with which one to select and use. Another important factor is that a majority of travel applications are designed for everyone traveling everywhere, not specifically for one kind of tourist and one subject matter.

The goal of this thesis is to create an effective and efficient user experience system. The project will be a travel planner for people to pursue an art tour of their own interest. It focuses on designing an effective user navigation system to guide tourists making their travel plans, and provides comprehensive tours to help people appreciate and learn more about art.

To achieve this project, this thesis will focus on interaction design, information design, multimedia technology, as well as user experience design. Considering the independent choice of different tourists, this design will provide various ways for them to make their own travel plans and discover art they are interested in.

The final design will be presented as interactive prototype which demonstrates the functionality of the user interface and experience and will be used for usability testing.

Keywords: travel planner, art tour, mobile devices, user experience system

Problem Statement

The tourism industry is regarded as one of the biggest sectors in the world, generating an estimated eleven percent of the global gross domestic product.^[1] Providing an effective way to help visitors enjoy their travel is an important task. Today many tourists still use some forms of printed material as their travel guide. These sources often contain outdated information. With the advancement of mobile technology and the extensive use of mobile devices, online interactive experiences have become an important aspect in travel research and planning. When planning a trip, the research engines on mobile devices will help you to find the information about your travel destination. You can find numerous solutions to make your travel plan from different applications. All sorts of accommodation and transportation are available in your mobile device. You can book them at any time. At the destination, the navigation apps will lead you to the sight spots, the restaurants, and the shopping districts. Also, you can translate foreign languages by using an online dictionary. A plethora of travel apps provides too many choices for tourists to select and use. Almost all the travel applications are for everyone, not specific for one kind of tourist. It is easy to get confused with which application is the most appropriate one for you.

Which user experience model is best to use when designing an online travel planner for people to pursue art? How can information, interaction, and user interface design create an effective and efficient tool for people interested in the art field to learn more about art and design when traveling?

For my thesis, I will create an effective and efficient user experience system for people, interested in art, to plan their travel plans easily. I will study and analyze the user's behavior when planning a trip, and create an appropriate way for them to help plan and organize trips related to discovering and learning about art. Specifically, my thesis aims to figure out the following questions:

- 1 What do people need to do when they plan a trip?
- 2 How many steps are acceptable when planning travel? How does the sequencing of information affect the experience?
- 3 Which way is appropriate to create travel itineraries for people pursuing arts? Will they prefer to choose recommended line? Or will they prefer designing by themselves?
- 4 Will a cross-platform travel planner be better for planning and managing travel itineraries?

The results of this thesis will help to build a user experience system of travel apps and provide a clearer direction to design a travel planner for travelers who want to learn more about the arts.

[1] Kabassi, Katerina. "Personalizing Recommendations for Tourists." *Telematics and Informatics* 27 (February 2010): 51–66.

Survey of Literature

Books

1 **Designing for Interaction: Creating Innovative Applications and Devices**

By Dan Saffer

New Riders. 2nd edition. 2009.

This book provides broad overview of interaction design. The content includes the design of digital interfaces, mobile devices, physical products, and also service design. It may help designers to think more about interaction and will provide a new thinking direction for the future design.

2 **Smashing UX Design: Foundations for Designing Online User Experiences**

By Jesmond Allen, James Chudley

Wiley. 1st edition. 2012.

Smashing UX Design introduces how to build a successful user experience system through a complete record of the designing process, including competition analysis, user profiles creating, information architecture building, digital model designing, prototyping, and also the digital page designing. By learning how to analyze the user experience, this book will be helpful for designing online UX system.

3 **Mobile Usability**

By Jakob Nielsen, Raluca Budi

New Riders. 1st edition. 2012.

Focusing on small screen designing, this book analyzes various application problems, and explains detailedly why some decisions are bad and why others are good. Also, the authors offer their solutions in how to improve user experience of mobile devices. For designers, this book will help them avoid unexpected mistakes and improve the design.

4 **100 Things Every Designer Needs to Know About People**

By Susan Weinschenk

New Riders. 1st edition. 2011.

This book is an interesting collection of designs and ideas about how people communicates with the world. Each sections are described with example and appropriate research. The information in this book will be useful for everyone who involved in communicating with people in any medium. People will learn how to understand user's behavior and needs, and how to motivate them to go further.

Survey of Literature

5 **Mobile User Experience: Patterns to Make Sense of it All**

By Adrian Mendoza

Morgan Kaufmann. 1st edition. 2013.

This book introduces what makes Mobile UX unique and how you can quickly master it. From this book, you can learn more about mobile user experience from using flows and wireframes to communicate your mobile user experience system visually, to applying some most common mobile patterns to create real websites or apps. It is fundamental for design students to learn the theoretical and practical concepts of Mobile UX.

6 **The UX Book: Process and Guidelines for Ensuring a Quality User Experience**

By Rex Hartson, Pardha Pyla

Morgan Kaufmann. 1st edition. 2012.

Guiding you through the user experience lifecycle process, this book is a great collection of different examples and real experiences of UX specialists. The concept introduced in this book will help you in any project environment, from web and mobile applications to different kinds of interfaces for ATMs, microwaves or refrigerators. It plays an important role in ensuring a quality user experience.

7 **Simple and Usable Web, Mobile, and Interaction Design**

By Giles Colborne

New Riders. 1st edition. 2010.

This book tells the rules of designing simple and useful interfaces. It is not a collection of patterns or design examples that provide the inspiration of user experience system design, but it is a set of rules which you need to follow when you prepare to design the interface for digital devices. From this book, you can learn how to simplify user experiences when designing digital tools and applications.

8 **Universal Principles of Design**

By William Lidwell, Kritina Holden, Jill Butler

New Riders. 1st edition. 2011.

With rich illustration and easy navigation, this book introduces 125 ways to enhance the interface usability and make better design decisions. It explains every design concept with various visual examples of the concepts applied in practice. It can be used for designers to expand their knowledge and improve their design expertise.

Survey of Literature

9 **Designing for the Digital Age:
How to Create Human-Centered Products and Services**

By Kim Goodwin, Alan Cooper
Wiley. 1st edition. 2009.

This book provides many suggestions about how to design successful products and services in the digital age. Every section in this book is described in detail and richly illustrated with examples taken from real products, real clients, and real design problems. It provides a comprehensive scope of user experience in digital age for designers to create human--centered products and services.

Online Resources

10 **Google's 2014 Travel Study:
App Mania has Ebbbed, yet Booking by Smartphone is Still Hot**

By Sean O'Neill
September 16, 2014
tnooz.com/article/google-research-travel-marketers-traveler-shopping-behavior/
Date of Access: September 19, 2014

This study displays several research data to show the changes of users' travel behavior, especially the changes of technology that people use for traveling. According to this study, smartphone apps are still favored, especially by business travelers. And cross-platform travel-planning is widespread. It is a useful study for designers to consider the devices which are used for making travel planner.

11 **Google Trip Planning Study: Devices, Web and Travel Video Impact**

By Karthick Prabu
November 22, 2013
tnooz.com/article/googles-study-multi-screen-usage-online-trip-planning-video-impact/
Date of Access: September 22, 2014

The purpose of this study is illustrating how trip planning behavior has changed over the past year through a lot of researches among the leisure and business travelers. It shows the travelers' behavior when preparing a trip, from determining the destination to booking flights and hotels. These data are important to design the user experience system for a travel application.

Survey of Literature

Travel Apps

12 **Tripit**

Tripit is a travel organizer that can help tourists organize their travel plans by simply forwarding all the hotel, flight, car rental, and restaurant confirmation emails to its email address. It can automatically transform the emails into a master itinerary, and tourists can view the plan anytime on any device. Also, it provides real-time alerts and notifies of the flight status.

13 **TouristEye**

Unlike the traditional travel planner which helps tourists organize a trip or find the best prices and options for the trip, TouristEye helps tourists build a wishlist of destinations. Tourists can add waypoints to places where they would like to travel, and also can share this place list with friends or family. This application makes it easy for tourists to find inspiration of places to go, to get ideas from trips of different sizes, and to get travel tips and experience from other tourists.

14 **TripAdvisor**

TripAdvisor is the quintessential travel planning service. It is not going to collect your travel information and help you to organize them to make a master travel itinerary. It provides a large amount of information, such as hotels, destination reviews, ratings, and photos. Integrating data from the travel process, this application provides comprehensive suggestions for tourists to have a better trip.

15 **WorldMate**

Like Tripit, WorldMate is a travel planner which can help tourists organize their travel itinerary and book hotels and flights. Using WorldMate, tourists can receive flight alerts and instantly find alternative flights. It provides all the vital information that tourists may need for managing, planning and organizing the trip. It is simple to use with beautiful interface design.

Design Ideation

Mind Mapping

Travel

Type

- Business
- Study Tour
- Adventure Tour
- Sports Tourism
 - Swimming
 - Sailing Climbing
 - Cycling
 - Surfing
- EcoTourism
 - Beach
 - Mountain
 - Natural Park

Booking

- Transportation
 - Flight
 - Railway
 - Car
 - Bus
 - Ship
- Accommodation
 - Hotel
 - Hostel
 - Inn
 - Motel
 - Camping
- Restaurants
- Tickets
 - Galleries
 - Museum
 - Activity
 - Park
 - Performing Arts

Package

- Documents
 - Passport
 - Cash
 - Credit Cards
 - Reservations
 - Others
 - Medical Cards
 - Travel Insurance
 - Driving License
- Equipments
 - Books
 - Camera
 - Batteries
 - Mobile
 - Music Radio
 - Sports Equipments
- Clothes
 - Regular Day
 - Evening
 - Sports
 - Rainy Day
- Medicine

Art

Category

- Visual and Audition Arts
 - Play
 - Dance
 - Movie and Television
- Visual Arts
 - Fine Arts
 - Architecture
- Auditory Arts
 - Music
- Imagination Arts
 - Literature

Movement

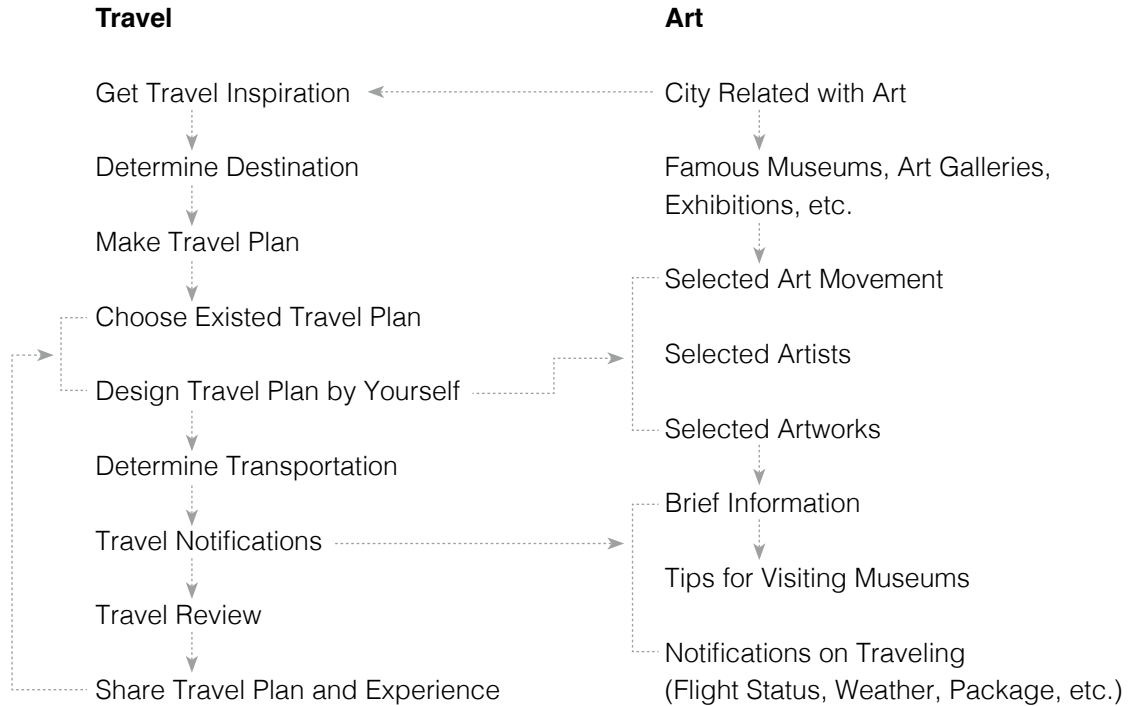
- Medieval Art
- Renaissance
- Post Renaissance
- Modern Art
- Contemporary Art

Artists

Art Works

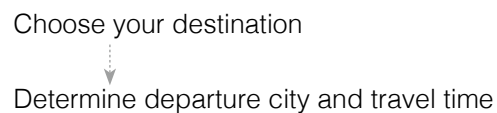
Design Ideation

Information Flowchart

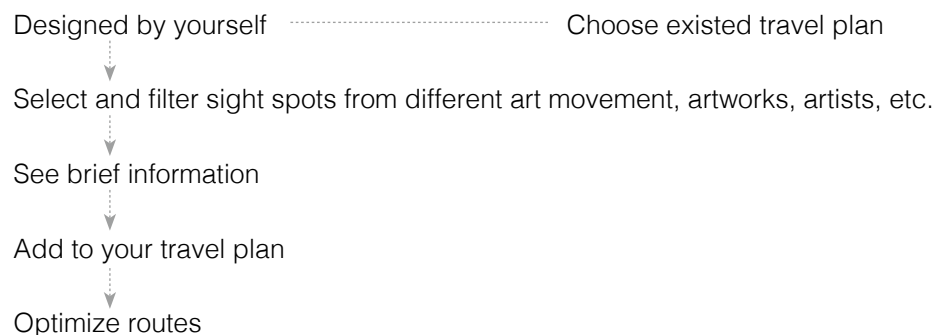


Process Flowchart

Part 1. Select Tour Routes



Part 2. Arrange a Schedule



Design Ideation

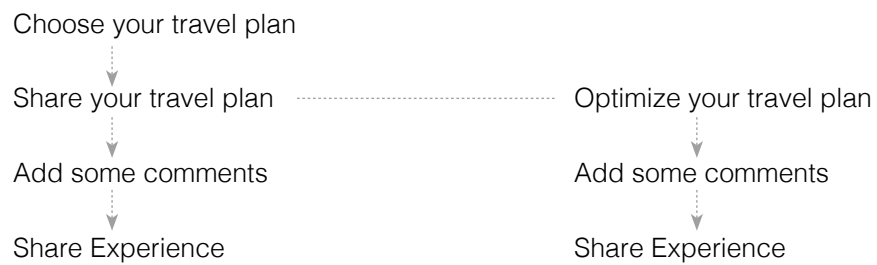
Part 3. Determine Transportation



Part 4. Notification

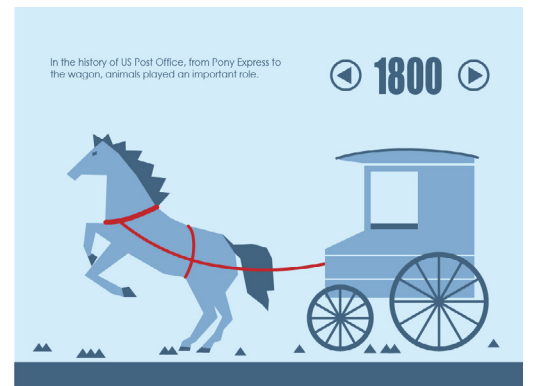
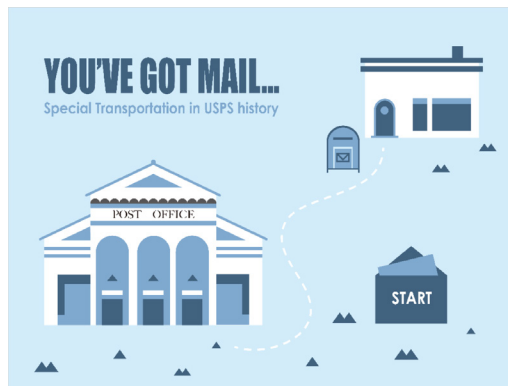
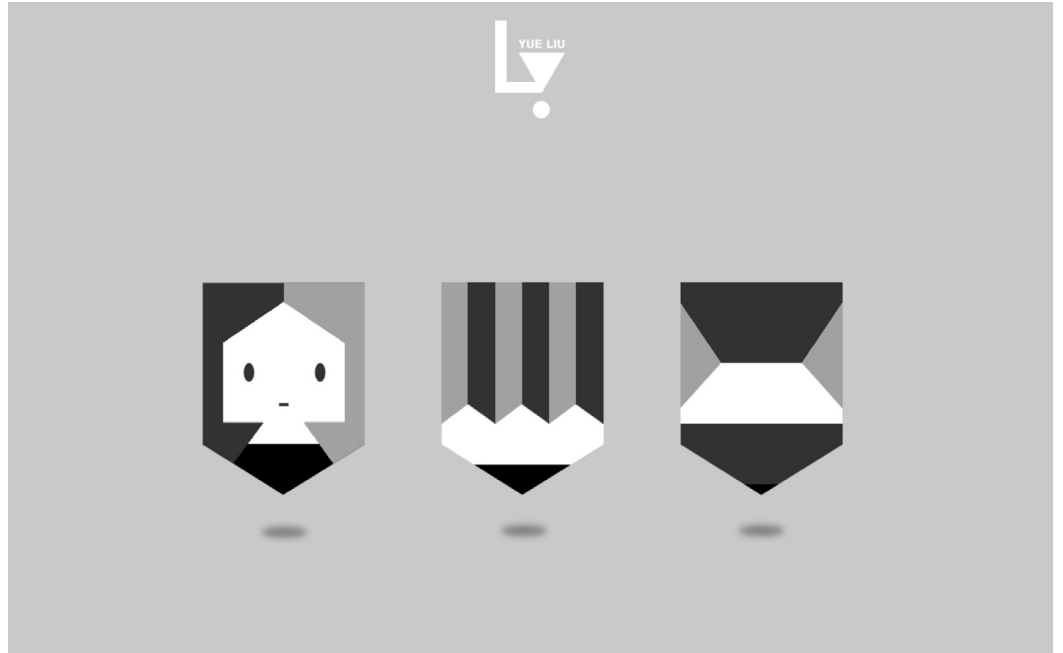
Notification settings

Part 5. Travel Review



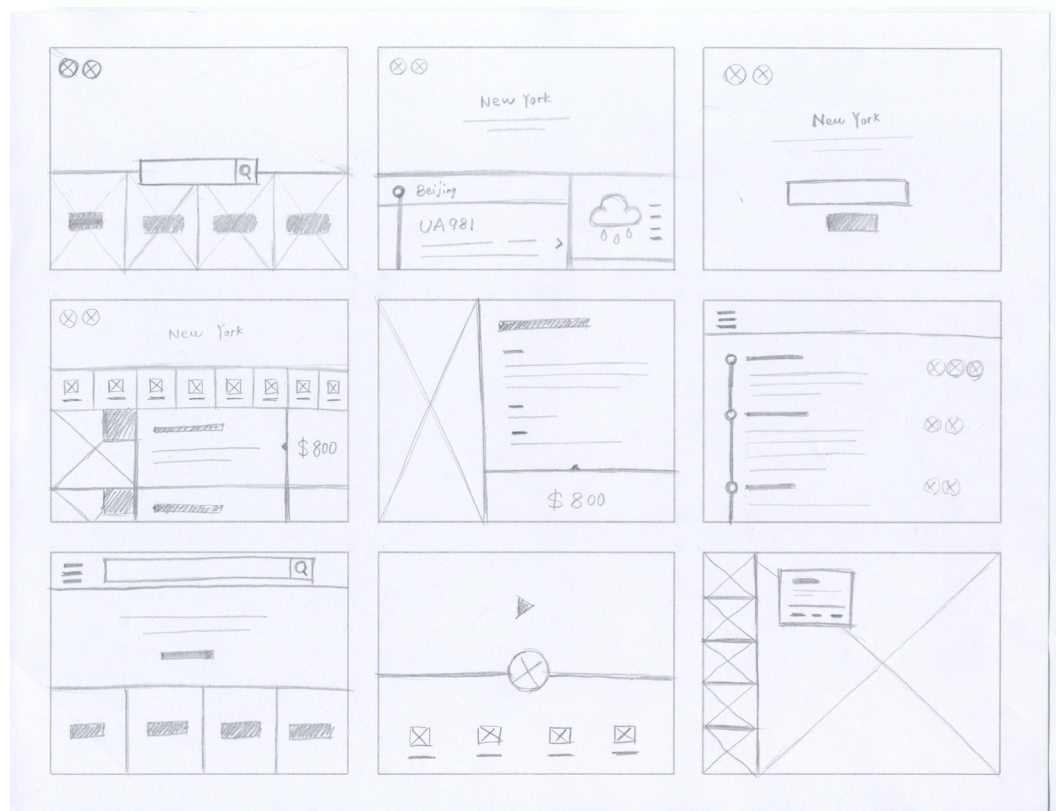
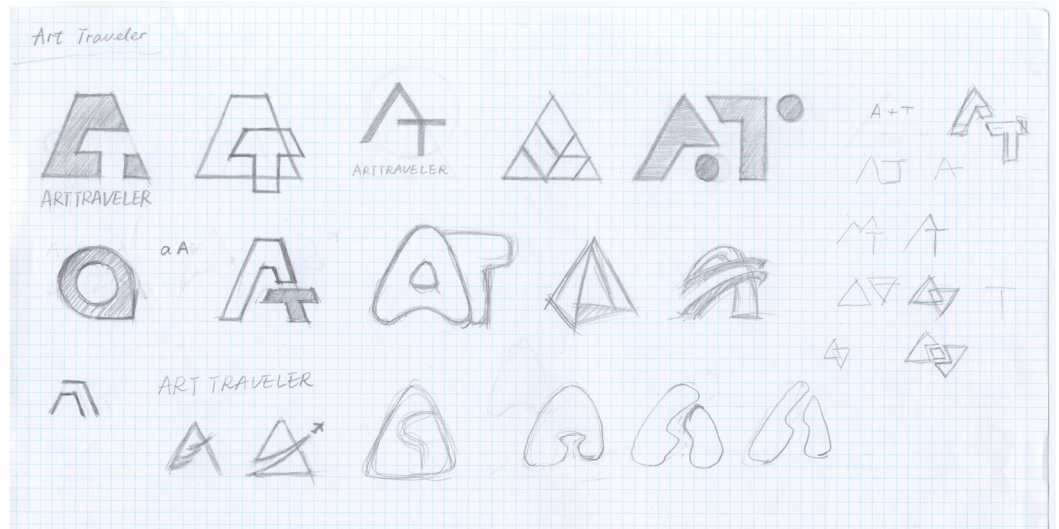
Design Ideation

My Visual Style

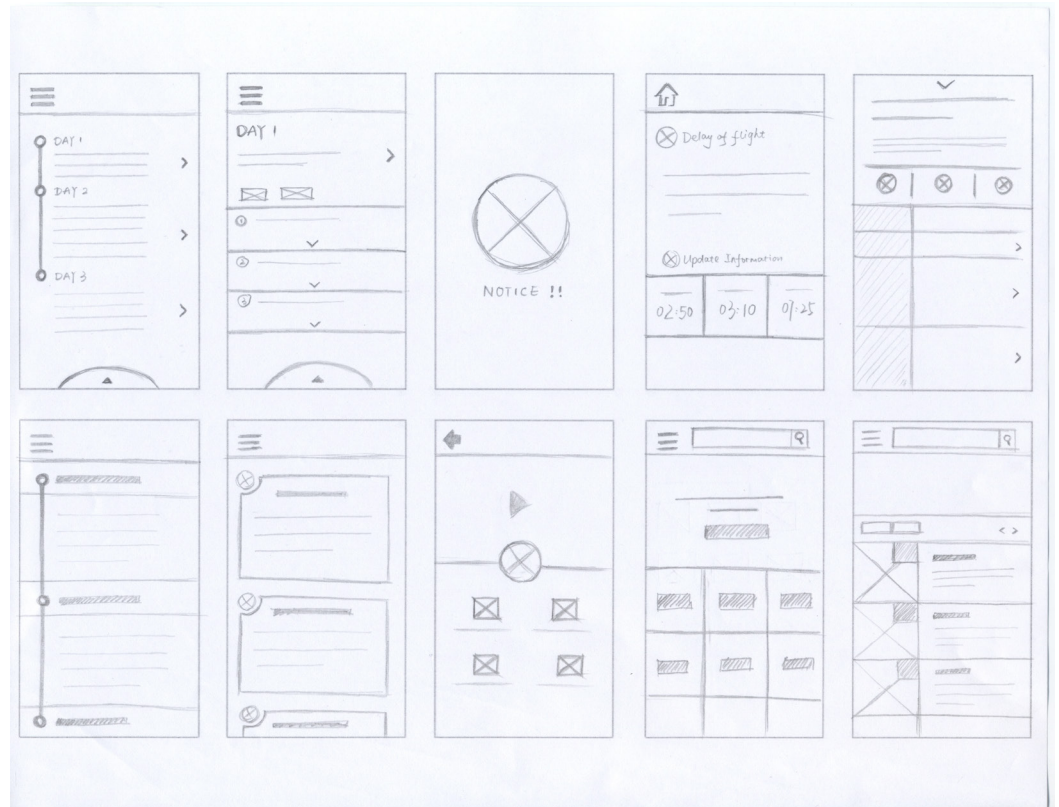


Design Ideation

Sketch



Design Ideation



Methodological Design

Approach

- 1 Study the current approaches of making a travel plan, and analyze their specialties and shortcomings that need to improve
- 2 Research the travel motivation of people interested in arts, and analyze their behavior on making a travel plan to figure out users' needs and their requirements
- 3 According to the analysis, create a user experience model of travel planner which can be tested by people who like arts and want to learn more about art when traveling
- 4 Collect feedback and data from surveys and summarize them
- 5 Revising the user experience model, based on my research findings, and design the interface of travel planner which will provide an easy and clear way for people to make their travel plan and enjoy a comfortable art tour

Target Audience

The target audience for my thesis will be people who is interested in art, including the art beginners who want to know about art, the art students studying a specific art movement, and artists who want to seek inspirations from traveling.

Software

Adobe Illustrator
Adobe Photoshop
Adobe Flash
Adobe After Effects
Adobe InDesign

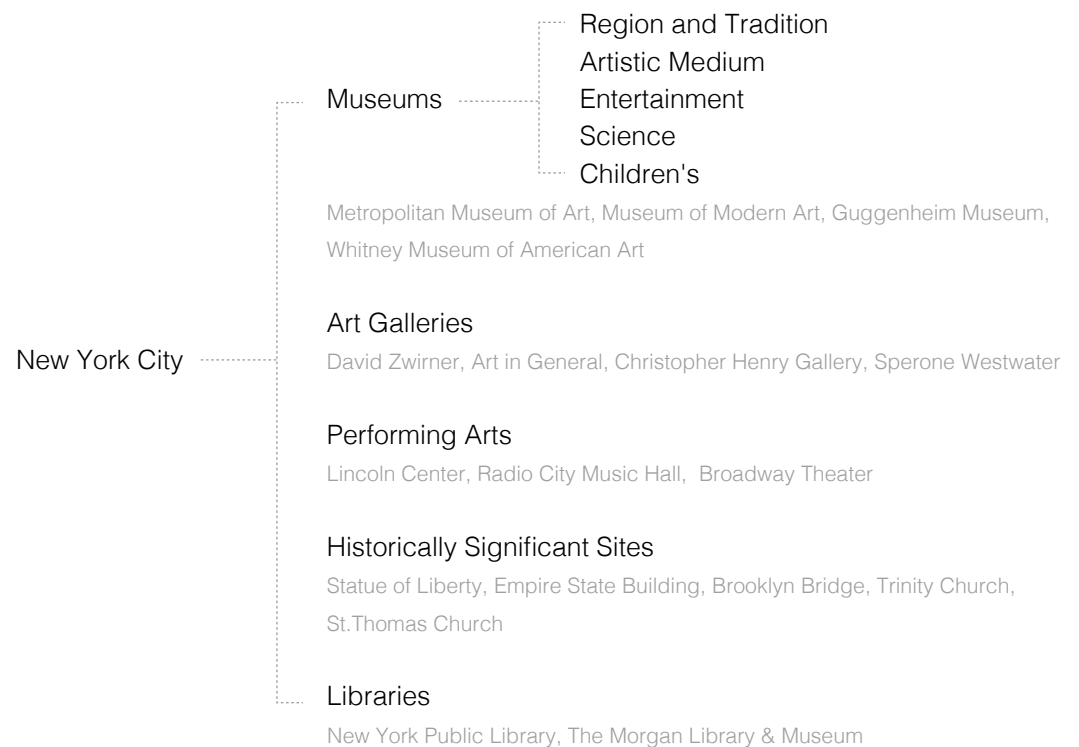
Deliverables

This project will be a user interface / user experience app design. The final design will be presented in the following way.

Interactive prototype

This prototype will be displayed on an iPad, and used for user experience testing. It will be a smaller piece of a large project.

For demo purposes, the subject matter will only be New York City. Users will have a pre-determined path to navigate through.



Implementation Strategies

I plan to implement my findings from this thesis into an interface design for a mobile application. This thesis requires a background knowledge of information graphics, application interface visualization, interaction design as well as the understanding of user experience design. I have done a lot of research on user experience system of mobile applications, and plan to research and study more on the information, interaction and user interface design throughout my thesis process. I will use Adobe softwares, such as Illustrator, Photoshop, After Effects, Flash, and InDesign, as well as using an Apple Macbook Pro laptop to build my thesis.

- **Adobe Flash** Interactive Prototype
Navigate through content
Select items / tourist locations
- **Adobe Illustrator** UI Elements, Buttons, Panels
Adobe Photoshop
- **Adobe InDesign** Wireframing, Initial Layout Design
- **Adobe After Effects** Visual Effects
Motion graphics/information design for attractions

Dissemination

I plan to distribute my research and findings for future audience interaction by posting it on my thesis blog. I will also leave printed copies with RIT Archives and the Visual Communication Design program as well as submit electronic copies to the RIT Archives, Digital Media Library, and ProQuest/UMI. Lastly, I will submit my final thesis and research findings to publications that are related with my subject area.

The following are publications that I may potentially contact or inform of my thesis research and project.

Magazines

Communication Arts

Boxes and Arrows

UX Booth

UX Magazines

HOW

Evaluation Plan

I will do a qualitative research study in the form of actual face-to-face interview and observation of user-interaction. The users will assess my design of user experience system and what they liked or disliked about my interface. After summarizing and analyzing the feedback, I will be able to improve my application, and make it more effective and efficient to operate.

Test Way

Face-to-Face Observation and Interview

Considerations

- Do people understand how to operate this application? Is the navigation system clear for them to get direction?
- Does the interface and interaction clearly express my design idea?
- Has the message reached the intended target audience?
- Do people consider my process is credible?
- Has I made an impact and upheld my responsibility as a designer?

**Success
Determinants**

- Message has reached the intended target audience
- People clearly understand the operation of this application and are able to use it easily
- My application makes an impact on my intended target audience and provide them an easy and comfortable way to make travel plan

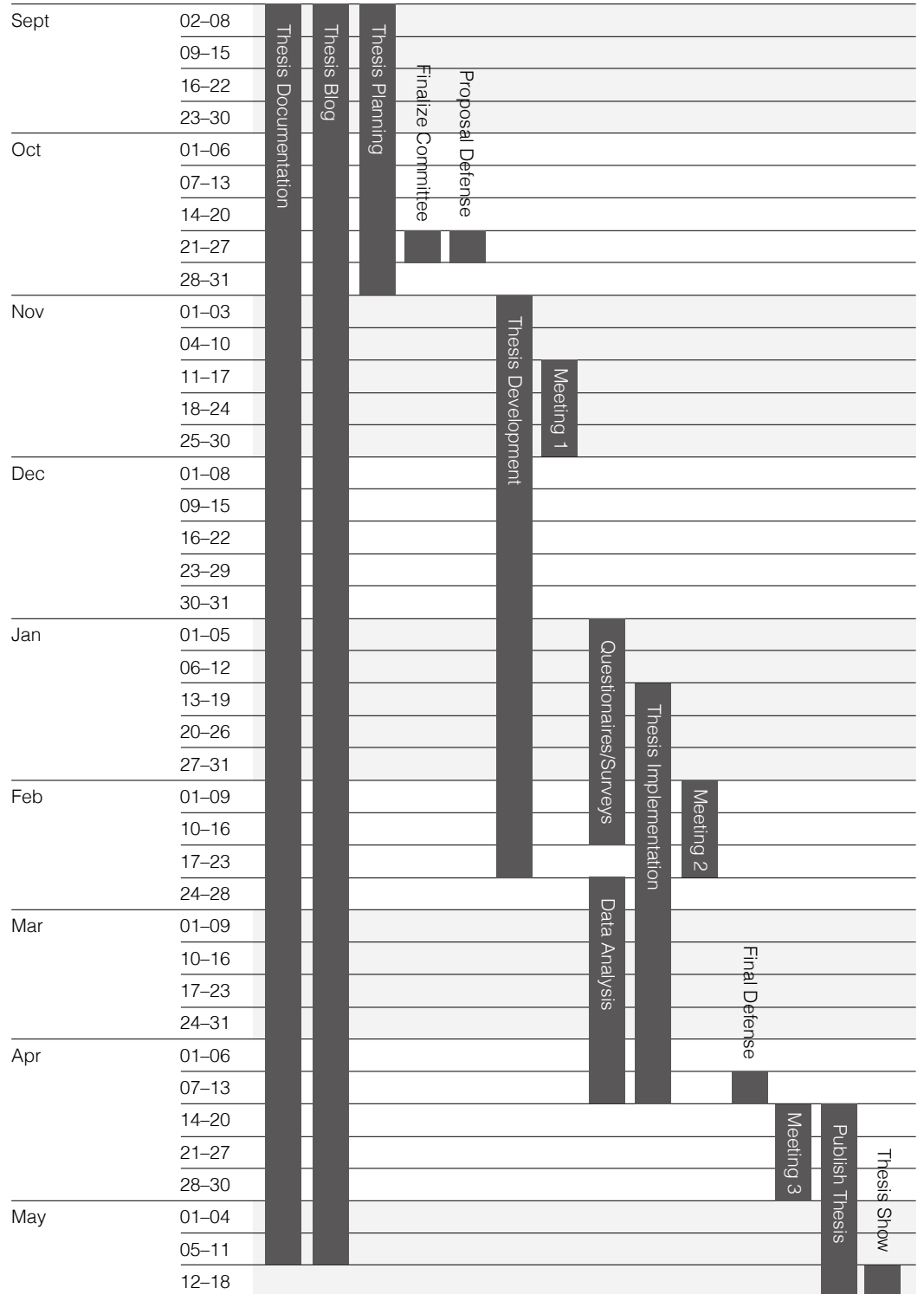
Pragmatic Considerations

Budget	Research	\$550
	Travel	
	Download Applicaitons related with travel	
	Dissemination	\$250
	Submitting final thesis research to magazines	
	Publishing	\$100
	Proposal, 2 copies	
	Final Bound Copies, 3 copies	
	Total	\$900

Numbers are an estimation of what I can expect to spend throughout my project.
All expenses are subject to change.

Timeline

2014



2015

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